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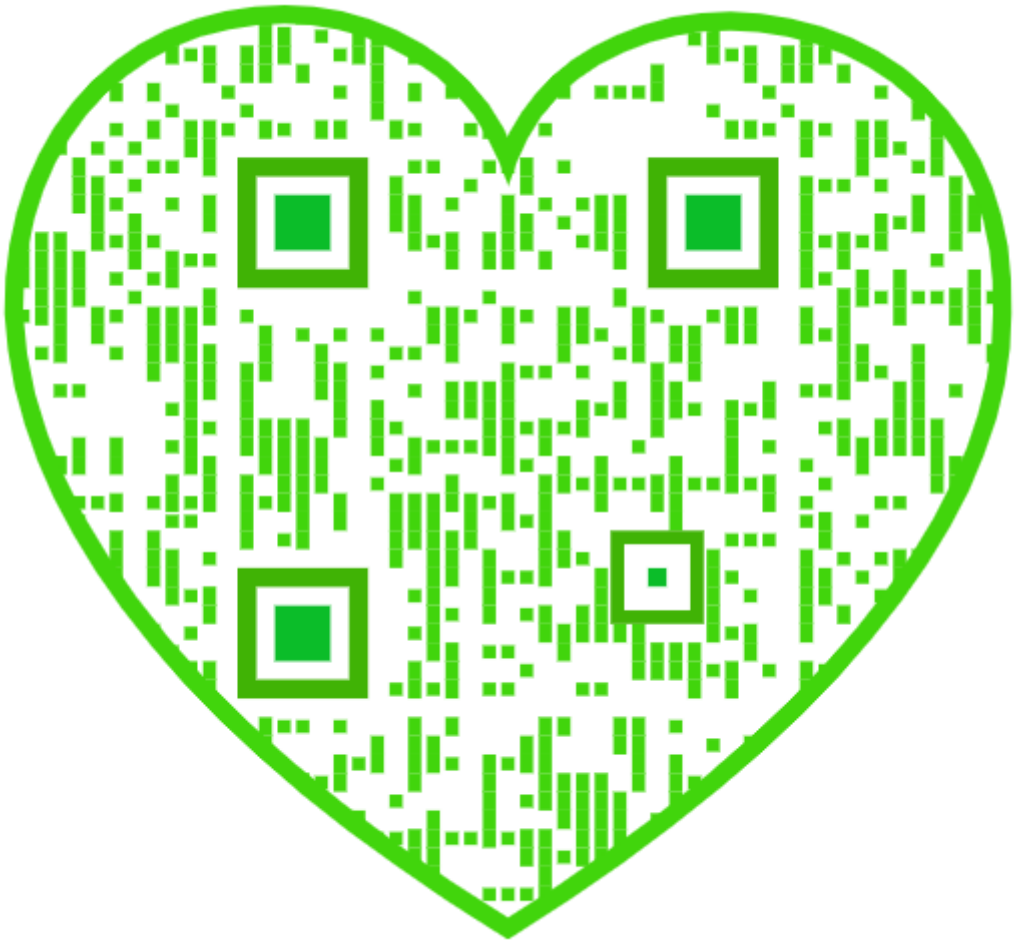

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HORSE OWNERS' GUIDE,

BEING A SYNOPSIS OF THE

Diseases of Horses

AND CATTLE,

AND HOW TO TREAT THEM.

The Anatomy of the Horse as Given by Mr. Dadd, V. S.

—BY—

A. H. ROE, VETERINARY SURGEON.

MENNONITE PUB. CO., PRINTERS:
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PREFACE.

THIS unpretending little Treatise is an attempt to supply an oft expressed want. Namely, a brief, popular and reliable Hand-Book on that department of Veterinary Science which treats of Horses, Cattle, and their Diseases.

It need hardly be proved by any argument of mine that in accordance with the advancement of Medical Science in our day, a new work (written up to the present time) is absolutely required to instruct owners of horses and cattle in the latest and most approved modes of treatment in all diseases of horses and cattle. Within the past twenty years new diseases, or rather new forms of old diseases (including the late Epizootic and Spinal Meningitis) have afflicted the equine race in our own country and elsewhere. These diseases were considerably altered in character from the type with which our Grandfathers were acquainted. For these reasons it would be exceedingly injudicious to pursue ex-

actly the same treatment recommended in books written for those times. In former days Bleeding, Blistering, Firing and Physicing were indiscriminately pursued, without knowing the wherefore for so doing. The object of the author has been to supply to such persons a brief, popular and if possible a reliable work for all such emergencies. How far he has succeeded in accomplishing that object he leaves to the judgment of others.

Grand Rapids, Mich., May 10, 1878.

On the following page is found a table of the bones in the structure of a horse, the notes below give explanations on the table.

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*) The bones in the sacrum of the colt consist of five pieces.

†) The pelvis of the young animal is made up of the two ossa innominata, each of which is formed of two pieces, the larger is called os ileum, the smaller, in allusion to the human pelvis, has been subdivided into two portions, named os ichium and os pubis

Dr. Hooper reckons the number of bones in the human subject at 248.

A Table of the Bones in the Structure of a Horse.

Bones of the Head.	Bones of the Cranium or Skull.	Frontal.		1
		Parietal,		2
		Occipital,		1
		Temporal,		2
		Ethmoid,		1
		Sphenoid,		1
	Bones of the Face.	Nasal,		2
		Ungins,		2
		Malarum,		2
		Maxillary, Superior and Anterior,		4
		Palatine,		2
		Turbinated Bones,		4
		Vomer,		1
		Posterior Maxilla,		1
		Lachrymal,		2
		Cuspidata, or Canine.		4
	Dentes or Teeth.	Molars,		24
		Incisores,		12
	Bone of the Tongue.	Hyoides,		1
	Bones of the Ear.	Malleus,		2
		Incus,		2
		Stapes,		2
		Orbiculare,		2
Bones of the Trunk.	Spine, { Vertebrae, Sacrum. *	Cervical,		7
		Dorsal,		18
		Lumbar,		5
	Tail.	Coccygis or bones of the tail,		15
	Thorax.	Sternum, at birth of d'ffnt pieces,		1
		True ribs,		14
		False ribs,		22
	Pelvis-Ossa Inominata. †			2
Bones of the fore extremities.	Shoulder.	Scapula,		2
	Arm.	Humerus,		2
	Fore Arm.	Radius, (Ulna conc'td with former)		4
	Bones of the Knee.	Os Schaphoides (1 to each knee		2
		Os Lunare,	" "	2
		Os Cuneiform,	" "	2
		Os Trapezium,	" "	2
		Os Trapezoides	" "	2
		Os Unciform,	" "	2
		Os Magnum,	" "	2
		Os Pisiform,	" "	2
	Below the Knee.	Metacarpi Magnum,		2
		Splents,		4
		Sessamoides,		4
		Suffraginis, (large pastern)		2
		Os Corronae, (small pastern)		2
		Os Naviculare,		2
		Os Pedis,		2
Bones of the hind extremities.	Thigh.	Femur,		2
	Stifle.	Patella,		2
	Leg.	Thibia,		2
		Fibula,		2
	Bones of the Hock.	Astragalus,		2
		Os Calcis,		2
		Os Cuboides,		2
		Os Cuneiform Magnum,		2
		Internal Medium,		2
		External Medium,		2
	Below the Knee.	Metatarsi, (or canons)		2
		Splints,		4
		Os Suffraginis,		2
		Os Coronae,		2
		Os Sessamoides,		4
		Os Naviculare,		2
		Os Pedis,		2
		Total,		242

ant landmarks are presented, which may be very useful in guiding to correct conclusions.

The Pulse.

The pulse of a medium sized, healthy horse beats from thirty-four to forty per minute. The pulse of a small horse may be a few more, or of a larger one a beat or two less. Age decreases the pulse slightly. Any considerable increase of the pulse over forty per minute, indicates fever or inflammation, and other symptoms must be looked for to determine the particular locality of the disease. Where great weakness ensues the pulse becomes fluttering.

The Membrane of the Nose.

This in health is of a light pink color. In fever and inflamation it is red.

Dysentery

Is supposed to be caused by any irritative substance that may come in contact with the mucus membrane of the stomach and alimentary canal.

Symptoms.

On account of the severe pain, in the first stages of this complaint, it might sometimes be mistaken for colic in the horse, but the copious and bloody evacuations will soon convince the most inexperienced veterinarian, that he has a very

different disease to contend with, and one, if not soon counteracted, will very soon place its victim beyond the reach of all medicinal aid. The discharges from the bowels in this disease are of the following nature:—Blood, Mucus and Lymph, often accompanied with Pus in the last stages of this malady, very fetid and disagreeable to the smell; attended often with high fever, ardent thirst, and considerable distress on pressure of the abdomen, there being often considerable swelling of the abdomen.

Treatment.

During the first stage of this disease give, Chloroform ½ oz., Laudanum ½ oz., and Tincture Jamaica Ginger 1 oz. in 1 pint of flax seed tea, repeating the same often as circumstances may require. In aggravated cases take the heads and leaves of poppies and hops and make a strong decoction, with which saturate the horse often and about as hot as it can be borne by the hand. If the horse has much fever give him Tincture of Aconite and Sweet Spirits Nitre in equal parts, ½ tablespoonful every 3 or 4 hours, on the tongue, and give him browned wheat flour, chocolate and flax seed tea as drink, and wheat or rye flour gruel to eat, and should he cloy on gruel, give him a little of the same kind of flour mixed with cut hay: and should he grow tired of the foremen-tioned drink give him drink of slippery elm (ground) of the shops, or marsh mallows; and do the very best nursing and dosing, right up to orders all through.

CASTRATION OF COLTS,

Is apparently at best somewhat barbarous, and the grand idea is in every case to adopt the safest and easiest mode, and that attended with the least risk, least pain, and least inconvenience to the animal operated on. We will not stop to discuss the merits of all the various modes of castration, but will recommend the mode introduced by Dr. Robt. Jennings, of Philadelphia, Pennsylvania. This mode is performed with the instrument known as the Ecrasseur, invented for the removal of Hemorrhoids (or piles) in man. The advantages of this over all other operations of this kind, are: That it is safer, less painful, more scientific, and less barbarous, than any operation now known. Secondly, heals quicker, seldom requiring over 10 to 14 days, and sometimes not more than 7 or 8 days. Thirdly, this operation is attended with less trouble to the skillful operator, as well as owner, as the colt is done with as soon as let up. No subsequent treatment, in common, is necessary, as in other methods, such as keeping scrotum open, &c. Fourthly, but little if any swelling occurs; the colt not being perceptibly affected in any way by this operation. And wherever the public sufficiently rely upon this plan and the skill of the undersigned to remunerate him fully in an excursion, the services of the undersigned can be secured for this or any operation warrantable in veterinary surgery. The undersigned being in possession of the most approved instruments of

the present day and professing the knowledge and experience necessary for their use.

Address, A. H. ROE,
GRAND RAPIDS,
Michigan.

COLIC,

Is divided into two kinds, Spasmodic and Flatulent. The causes are set down as follows: Drinking cold water when the horse is very warm; change of food, as from old dry corn and hay, to green corn or grass; exposure to cold air when in a heated state. There seems to be a proneness, or predisposition in many horses to this complaint. In my opinion, however, the vast majority of cases of colic are brought on through overloading the stomach with hard and indigestible food, where age and abuse have impaired the digestive powers of that organ, and the food taken in, instead of imparting its true nourishment to the system, becomes a foreign substance; ascidulates, creating through that means gasseous substance, which instead of nourishing and upbuilding the system, (unless speedily changed or carried off), destroys the life of its victim.

SYMPTOMS.

Of these painful and destructive maladies, we will first treat the Flatulent form of this disease, which comes on very suddenly; pulse very seldom much hurried beyond its natural beat in

first stage of this disease; the limbs and ears being about the ordinary warmth. If at work, the horse stops and presents signs of distress; lies down or throws himself recklessly down, gets up, paws, looks round at his side, and throws himself again, repeating about the same programme, until the skillful doctor cures or the "Equine Tragedian" leaves the stage of existence forever.

Treatment.

That must succeed most infalliably in this form of Colic, can naturally admit of but little change from that recommended for spasmodic colic; the two forms of colic being so nearly allied that it is often impossible for the most accurate Diagnosian to draw a true and consistent line of demarkation. But will say that the present form (Flatulent) must (if possible) receive more prompt treatment, from the fact of the alarmingly bloated state often found, in which, the violent throes of the animal has been known to rupture the stomach. Double the amount of every narcotic recommended in spasmodic colic, wherever the violence of the disease demands—kill the pain or it will kill the horse.

Inflammation of Stomach & Bowels.

While really one and inseperable in form and nature, are redundantly and irksomely treated under both of the above names, which I do not think admit of any such division, from the fact

that their form and nature are identical in almost every respect—it being impossible that the stomach should be affected without the intestines, or the intestines and not the stomach.

Causes.

Protracted cases of colic often leave the stomach and bowels in a highly inflamed condition, with pulse much hurried but very weak, sometimes hardly perceptible; legs and ears cold; belly very tender to the touch; constant pain; sudden and great prostration; respiration more and more quick, and signs of very great suffering; eyes present a wild, stareing and haggard appearance; pupils dilated; sometimes making such violent ado as to make approach hazardous. But all of a sudden, from his apparent calmness, his master may imagine that he is going to recover. But only a momentary delusion lulls his fears—for all at once he starts up in the most intense agony, and it is soon evident that the insidious giant is about reaching the very vitals of the sufferer; mortification if not already begun, now sets in and closes the scene.

Treatment.

If cases of this disease have been incorrectly diagnosed (and consequently mistreated) or neglected until the above symptoms are present, give the poor animal something to lull his dying groans. But if taken in time give him ½ oz, of Oil Turpentine and 8 grains Valerianate of Morphia in flax seed tea or browned flour gruel, every 4 hours; and as an alternating fever dose a common teaspoonful of tincture Aconite, every four

hours, giving first dose of Aconite just two hours after Turpentine and Morphia. But it is often best to establish an irritation of the surface through thick mustard paste, repeatedly rubbed over the belly, or the strong liniment made of Spirits Ammonia 2 oz., Turpentine 2 oz. and Spirits of Camphor 2 oz., or any quantity in same proportion. Keep comfortable and quiet. Feed bran mash if any appetite, and give flax seed tea, or browned flour chocolate drink.

Sweeney.

Is characterized by wasting away of the muscles of the upper part of the shoulder and is sometimes attended with lameness, but not always; it is not considered among the original affections, but is the result of sympathetic action with some other part, unless such violence through strains, or bruises, or other accidents, directly affecting the shoulder, have struck it with such force as to occasion such atrophy.—This affection, by some, is set down as of very easy cure, which, in many cases prove true, but in my observation in regard to this affection (where a severe strain has taken place especially) is that it is very difficult (to say the least) of cure; but will append some of the most successful of the remedies generally applied.

Treatment.

Take Aqua Ammonia, Oil of Spike, Spirits Turpentine, Sweet Oil, and Alcoholic Spirits of

Camphor, of each 2 ounces, and as soon as well mixed by shaking, apply at least as often as every night and morning, until well; or in case of failure of above liniment, put in seton as follows: Take long seton needle, loaded with tape (or cord, composed of silk or linen thread) tape or narrow ribbon, however, being preferable, from 6 to 10 inches long, grab up the skin over sweenied part with the thumb and fingers, griping together as closely as possible, (the horse being securely held by nose twitch), and then pass needle just between your clenching thumb and finger gripe and the breast bone; tie the ends together, forming loop. Shift the loop round and cleanse once each succeeding day, and should the discharge be subsiding before the muscles appear to be replenished, drop a little Turpentine into wound, or renew seton as before described.

RINGBONES.

This is one of the classes of disease styled Exostosis, or extra bone growth, and is known by every person at all acquainted with horses as a circular, rough, bony ring, around the coronet of the hoof, and one author describes it as an effort of nature to add to the strength of the parts, and enable them the better to withstand too early work or heavy concussion, and are most commonly found on draft-horses, with upright pasterns and small feet. They do not invariably produce lameness, they nevertheless con-

stitute in the horse market an *eye sore*, and to say the least of them, constitute a very disagreeable species of unsoundness, for which we propose no cure but fireing.

Bone Spavin.

This consists of a bony enlargement on inside of hind knee, or hock joint, and is caused in young horses by over-work, before the bones have acquired full strength.

Treatment.

In commencement apply cold applications, as recommended for splint; but in cases of long standing, after joint is severely affected, and Tincture of Iodine, Blistering, and Counter-irritants, generally, have failed, use the Actual Cautery (or hot iron), or to use the veterinary term—fire it.

Splint.

This is an enlargement on inside of front leg, just below the knee joint, and almost invariably a disease common to young horses. It may sometimes be situated near the pastern, and may occasionally be found almost encircling the limb. When immediately under the knee the

splint is most apt to interfere with the natural action, or produce lameness. In all cases this disease commences in the Periosteum—the vascular membrane covering the bone. Over exertion, and concussion, in badly shaped limbs, drives to it an over supply of blood, the parts become hot and tender, and lymph is exuded from the inflamed vessels, and gradually converted into bone.

Treatment.

In the beginning, while there is much fever, keep well wet with the following preparation:—Sugar of Lead 1 oz., dissolved in 1 qt. of water, and an addition of 1 pint of Vinegar, by means of cloths saturated in foregoing solution, or if handy to stream or pool of water, let the horse frequently stand an hour at a time therein. Leave him idle 20 to 30 days. When the heat leaves the limb apply the fly-blistering preparation of the shops, or ointment of Binoiodide of Mercury, or the hot iron. The foregoing remedies condense and harden the bony deposit, but do not remove it. Union shortly takes place between the large and small splint bones; swelling becomes solid; the lameness disappears, and the splint still remains, but scarcely ever produces any subsequent blemish or inconvenience.

Retention of Urine.

This may arise from many causes, among which are driving the animal too long without

stopping to urinate, as well as long exposure to severe cold; likewise when laboring under severe and general spasms, as in cramp colic; from calcarious accumulations of gravel, or stone in the bladder, etc., are a few of the many causes of Retention of the Urine.

Symptoms and Treatment.

About the same as those of inflammation of the Kidneys, and where the pain is very severe, introduction of Catheter, and one or two blankets wet in hot water and applied over the kidneys, and binding first a gum or oil cloth, and then one to three dry horse blankets (the number to be guided by the season of the year, and temperature) in order to get up, if possible, free perspiration and consequent relaxation of the system. Should the pain and retention yet continue, give him 2 ounces Laudanum and 2 of Sweet Spirits of Nitre in ½ pint new milk, repeating the same dose often as necessary.

Scours or Purging.

May be brought on by change of feed or water, but full oftener from over-driving, until general exhaustion and relaxation of the system is brought on, under which circumstances the bowels frequently become the vulnerable part.

Treatment.

This disease is so plain that we need not describe its symptoms, but shall proceed at once to

its remedies. Give 1½ ounces prepared chalk, and ½ drachm Tannin, in combination with one drachm Extract Logwood, in 1 pint warm water, repeating dose as often as necessary, and do not allow the horse to be worked until entirely recovered, as relapses are always hazardous if not fatal in their tendency.

WORMS,

Are a parasitic formation common to many, if not all animals, and may cause the death of far more animals than is generally supposed by owners, or doctors.

SYMPTOMS.

A rough, ragged coat, haggard eye, colicky pains, gasping, debility, sluggish movements, skin covered with scurvy blotches, small, feeble pulse, belly drawn up, breathing slow, irregular appetite, food badly digested, agitation of the heart, dung coated with mucus, a peculiarly pale appearance of the fundament, rubbing the tail. The foregoing symptoms are not common in all cases.

TREATMENT.

Use worm powders, 1 teaspoonful twice a day for 4 or 6 days, in scalded bran: then give strong Senna tea and Glauber Salts (dissolve salts in the tea) sufficient to carry off the contents of the bowels—and if convenient keep the horse in a shady pasture.

Poll Evil.

This is an affection happening to the horse, only when his blood is in morbid condition, (as stated by some authors), but in my opinion and experience, let the blood be never so pure, and the horse receive a blow on the prominence, called the poll, sufficient to cause extravasation at the Periosteum, suppuration is very liable to result and should the matter be too long pent up it may prey upon the bone.

Symptoms.

Swelling and inflammation of the poll, with great tenderness, lasting sometimes for weeks and months before it breaks.

Treatment.

If matter is already formed, open at once by making a large incision, but, if the beginning of swelling use the following liniment: Aqua Ammonia 2 ounces, Alcoholic Spirits Camphor 4 ounces, Turpentine 2 ounces; with which wash three times per day and keep covered with an oil cloth hood. If matter has formed, and been drawn off, syringing out daily with Castile soap and warm soft water, and dress with the following preparation, Glycerine 4 ounces and Carbolic Acid 1 ounce, mix and apply once or twice each day.

CHOKING,

But rarely happens with the horse, (but frequently) among cattle; and when in the horse, the treatment must be prompt if successful, and is always dangerous according to position; lodgment immediately over entrance of windpipe being attended with immediate danger; as it may suffocate at once.

TREATMENT.

Move the horse sharply and if that does not excite coughing, let him be jumped over a fence or some object that will excite violent expiration, when the air so suddenly rushing in through Bronchail tubes, must produce a spasmodic action of the air cells, which through the violent coughing produced, may cause the sudden ejection of the obstacle; but should this likewise fail, with one hand grasp firmly the windpipe, shutting off both inspiration and expiration, until the horse begins to strangle, and suddenly let go, when he will cough violently and may throw out the obstruction. Should the last experiment likewise fail, thrust the right hand into the throat, (the mouth being securely held open) and if possible, pass the hand or fingers far enough to grapple the object by the hook formed by the fingers. But should all the foregoing efforts fail the only reliance must be in a free lengthwise incision, right through upon the obstruction, just large enough to at once extract it, when the incision must be closely brought together and stitched up. Give the horse gruel to eat

until he can safely eat grass,—if in grass time, and if not any kind of food he may best relish. Let his drink be whatever he appears to best relish, and if bowels appear costive, give salts in his drink and plentiful injections of Castile soap-suds and let him rest until entirely well.

Diabetes.

This takes place more frequently during the warm season, when thirst is most ardent, and consequently the greatest natural secretion of water to the bladder, as well as the accompanying material which often forms the future growth of stone or calculi in that organ.

Causes.

These are almost identical with those of inflammation of the kidneys—and particularly from exposure and sudden straining.

Symptoms.

In the economy of natures continual draining, the continual and urgent thirst is calculated to supply the deficiency resulting. The urine in this disease is very abundant, clear, and colorless; the animal continually loses flesh, coat becomes rough, standing out straight from the body; his appetite from voracious, fails, and if not soon relieved, may lead to a complication of diseases.

Treatment.

Administer morning and night the following mixture: Iodide of Potassium 1 drachm, Iodine 1 scruple, Carbonate of Soda 4 drachms, warm water ½ pint—and good nourishing diet.

Calculi or Stone in the Bladder.

These deposits may and frequently do exist long before any serious inconvenience is felt by their victim.

Symptoms.

Urinate frequently, but in small quantities, and is of a turbid, yellow, or thick, whitish color; the animal often looks around at his sides, paws, kicks its belly, and appears relieved by changing position.

Treatment.

Administer night and morning, 1 drachm of Muriatic Acid, in a pail of water. Many remedies might be proposed for dissolvidg the calculi in the Bladder, but I seriously question the efficacy of any medicinal agent whatever, from the fact that to administer those powerful medicines, in strength sufficient to effect those formations in the bladder, their affect upon the mucus membranes would be far more disastrous than the remaining of the calculus, and therefore an operation is the only chance of cure and the sooner it is performed the better for the victim.

FOUNDER OR LAMINITIS.

In acute stage may be readily known by the following signs, *viz:* The animal stands with his fore feet braced as far forward as possible, while his hind ones are brought forward under his body as though in the act of halter pulling; and his fore feet in such apparent pain that he is resting as much as possible on hind legs.

CAUSES.

The common causes of this disease are set down as almost innumerable, a few only of which we will give, *viz:* Driving through cold water in a highly heated state, and stopping before the horse has recevered from the shock; giving feed or drink under similar circumstances; stopping him in an exposed position under like heated condition and leaving him long exposed to cold, or cold and damp air, as well as many other causes not admissible in our brief space.

TREATMENT.

That which has always proved most successful is to bleed at once from jugular vein from six to twelve quarts, according to size, age and condition, after which immediately give 1 to 1½ lbs. of Glauber Salts, and should Salts not operate in two or three hours, give the horse the following injections:—Castile soap-suds without stint, until a thorough passage is brought on; and instead of poultices to the feet, would advise that the

horse be placed into a flat, shallow box, filled with water, into which place the front feet (if not large enough for all his feet), to the depth of coronet, keeping him in this position for a day or two, after which (if in warm weather) he may be turned out in shady, low ground pasture throughout the day, with a thick, heavy cushion over each foot, kept well wet, and cushion stuffed with anything that will hold moisture, or if more convenient, tie the animal so that he is forced to stand with feet in a pool or stream of water part of each day. Though similar treatment to the above has been proposed, I have personally witnessed one case where the animal was so badly foundered that every hoof was lost, and were replaced by just as good feet as the original, and good and serviceable as previously, but always thought if changed in any way whatever it was that the carriage of the head might have been lowered. I name the above as a case in point, from the fact that my father and myself used the animal referred to, in the practice of medicine a number of years after recovery from the terrible founder alluded to.

TETANUS, OR LOCK-JAW.

This may be brought on by a sudden shock upon the nervous system, or through violence to some particular nerve, or ganglion of nerves. The foregoing remarks are particularly referable to Traumatic Tetanus, which is caused by injuries so slight as often to have attracted no atten-

tion whatever, until through some idiosyncrasy (peculiarity of constitution), the prick of a nail, penknife, or even that of less instruments may strike upon some particular nerve or nerves, and bring on this particular form of this terrible and painful affection:—while on the other hand Idiopathic Tetanus may be brought on through the influence of cold, heat, wet, intestinal irritation, etc.

Symptoms.

In this affection of the Horse the nose is poked out, the tail upraised, muscles hard and rigid, the gait straddling, and bowels constipated. But the most prominent and diagnostic symptom is protrusion of the hair of the eye, (called membrana nictatans), while the tonic spasm of the muscles prevents the horse from opening its mouth. Symptoms in the lower animals are not as in man, confined to one set of muscles, or one part of the body, but come on gradually, reaching the worst in three or four days; but the more rapidly developed the more fatal.

Treatment.

In this disease treatment has proved generally unsuccessful, from the fact that it is frequently impossible to open the mouth wide enough to introduce any medicine whatever; but if any can be taken, would advise, first: Extract Beladonna 4 drachms, Chloroform 1 oz., to both of which add 1 drachm Tartar Emetic, dissolved in ½ pint hot water, repeating same dose every 3 or 4 hours. Prepare likewise a strong decoction

of tobacco, in the following way: Plug Tobacco 1 lb. cut fine, upon which put 2 gallons boiling water, let it steep 30 minutes, and while hot as can be borne, saturate the whole body as often as it dries, giving 1 pint of same, diluted with 1 pint of water once or twice per day, as injection. Introduce Valerianate of Morphia likewise on the Hypodermic plan extensively. Let the body be kept comfortable, in free, healthy air, in noiseless stalls; and if the horse can open his mouth to receive nourishment, give him warm gruel plenty.

Hidebound.

This is claimed to be brought on by some abnormal condition of the system, and the existence of worms in the horse is one of the causes set down by authors; for cure of which they recommend condition powders, cathartics and various other medicines—the cure of which I have never seen to fail, (where the horse had a good appetite) to recover by a plentiful use of the powders, resulting from the proper mastication and digestion of oats, rye and corn, with a due amount of grass or hay, and good care. The grain however, should be ground for either young or old horses, from the fact that mastication is imperfect with both. But would recommend the horse to be turned out in good pasture as much as possible.

Mange or Itch.

This is ascribed to the effect of a very small insect called *Acariequas*. The skin about the

neck appears as if parched; hair comes off in spots, leaving rough, scabby patches; the itching intolerable, causing almost constant rubbing against anything within reach.

Treatment.

In a clear, warm day, place the horse in the sun, take scrubbing brush or stiff broom and Castile soap-suds, and scrub him all over, and as soon as dry take one quart of Olive Oil and 2 ounces of Coal Oil, and when well mixed, saturate all over, and repeat the same process if necessary.

Opthalmia.

Or disease of Optic Nerve.

May be brought on by blows or violence of any kind to the eye; pulling over-loads; fast driving, or anything calculated to over-tax the nerve power. It may likewise be brought on through sympathetic action of other diseases.

Symptoms.

At periods varying in different horses, the pupil of the eye becomes overcast with a clouded or milky appearance; has more or less fever; accelerated pulse; loss of appetite; a dull and sleepy appearance; and a partial and sometimes almost total closure of the lids of the eye, while the pupil is always contracted in a degree correspondent to the irritation produced by the admission of light, and as the disease progresses their appears a white speck or cloud in the Lens, behind the Pupil and Iris.

Treatment.

Place the horse in a dark, cool stable and wash the eye six or eight times per day with a solution of Sugar of Lead and Beladona, in the proportion of 30 grains of the first to 15 of the latter, in 1 quart of rainwater; give the horse a tablespoonful or two of Glauber Salts in each pail of water, and if he will not take enough in that way to keep the bowels open, give by drench, and injections of soap-suds, and should they be very much irritated, a seton a little way removed from the eye, towards the curve of the jaw, has been extoled as highly efficacious. The idea used to prevail very generally that wolf teeth (so called) were the common, if not universal cause of all natural blindness. and even yet appears to be entertained by some; never reflecting that the teeth are just as subservient to the health and well-doing of the horse as the eye and that they will be removed in their own natural time without any violence.

Curb.

Is an enlargement which makes its appearance about two inches below the hock, and may be occasioned by a blow, but in my opinion is much oftener the result of over straining before the bone has acquired its full strength. Some authors have attributed it to straining of the sheath through which the flexor tendons pass, but I consider it of much greater importance to (if possible) seek out the cure, than indulge in unimportant speculation in reference to cause.

Treatment.

If attended to in time cooling applications, (such as Sugar of Lead, or Acetate of Zinc, 2 oz. in 2 quarts of vinegar and 2 of water), or at farthest the use of a counter-irritant Liniment of Ammonia, Turpentine, Origanum, and Alcoholic Spirits of Camphor, 2 ounces of each, applied 3 or 4 times a day, may produce the desired effect, but if neglected until firmly seated, use strong Tr. Iodine or Binioiodide of Mercury, 2 drachms to 1 ounce of lard, to be rubbed over part affected two or 3 times per day, until blistered; but once or twice on the young, thin-skinned animal, is all that is necessary, and let this precaution always be kept in mind, not on any account to allow the ointment to spread upon the surrounding sound parts.

Parrot Mouth.

This is an overlapping of the upper jaw and projection of upper front teeth, which naturally suggests the similarity to the parrots bill. If this interferes with eating the extra length should be removed with saw or tooth shears. They are sometimes tolerable keepers and fair workers, but do not think they can ever be brought to anything near perfect mastication, and to say the least of them are greatly depreciated in value.

Fistula of the Withers.

Belongs to the same class of diseases as Poll Evil, and is brought on by blows, bruises,

saddle galls,—and requires the same treatment as *Poll Evil.*

Stomach Staggers.

This is claimed to be caused by overloading the stomach of the hearty feeder, without exercise enough to keep digestive organs in motion, and on the contrary inducing a virtual paralysis through over-distention of that organ, which (when in health) is to the human system what the great balance wheel is to the machine.

Symptoms.

The horse appears drowsy, but every now and then disposed to push forward, unless hin dered by wall, manger, or some object so strong as to resist his passage. As the disease advan ces to the second stage, the horse becomes from drowsy to sleepy; the drowsiness sometimes be coming so strong that it is almost impossible to arouse him; will sometimes take a mouthful o hay or feed and drop into a deep sleep before i is swallowed. Constipation being one of the strongest symptoms in this disease, we must oper our treatment by active cathartics.

Treatment.

Give 1 pint of Linseed Oil, with 20 drops o Croton Oil, or 1 drachm. Calomel, shaken wel through it; give injections of warm soap-suds i five or six honrs, and should the former dose no operate add handfull of salt; rub and bandage

limbs and use the following liniment about the head and along the whole course of the spine, bountifully, *viz:* 2 ounces Aqua Ammonia, 2 ounces Turpentine, 1 ounce Oil Origanum, 2 ounces strong Spirits of Camphor. See that the bowels are actively moved by above means, and should you not be able to get the ingredients for above liniment at once, use Spirits of Turpentine or Aqua Ammonia plentifully over the spinal column and about the head. But, if in spite of all the following means, the horse is becoming worse and worse, plunging against everything within reach and apparently indifferent to everything about him, hopeless inflammation has siezed him—and the sooner he is shot the better—as recovery is impossible.

THOROUGHPIN.

This is a disease sometimes identified with Bog (or Blood Spavin), but so distinct in situation, as to demand (at least) a separate and distinct name; for while Bog Spavin, like Bone Spavin, is always found on the inside of hind leg, just below the knee (or hock joint) and is easily compressible outwards and inwards, and if the same kind of remedies recommended for Bog Spavin do not cure, *viz:* (Iodine and the Rubber bandage, to the extent of causing adhesion), there is but very little hope of ever being able to effect a cure at all.

SPRAIN

Of the Hinder Sinews of the Legs.

The horse is suddenly very lame, growing worse all the time if used.

SIGNS.

By passing the hand over the hinder tendons (alluded to in heading) you will find them somewhat enlarged and proportionately inflamed.

TREATMEMT.

Use cooling and stringent washes, *viz:* Acetates of Zinz or Lead, 2 ounces of either, to first be dissolved in ½ gallon cold water, and adding 2 quarts strong vinegar, with which bathe several times per day for 3 or 4 days, and if you do not see some decided improvement after that time has passed, prepare the following, *viz:* 1 quart Alcohol, Camphor Gum 2 ounces, Turpentine 2 ounces, Resin Soap 1 lb. Shave the soap as fine as possible, and put in large, stout bottle and agitate until thoroughly dissolved, when it may be applied 3 or 4 times a day, rubbing in well with the hand. If after all the foregoing means the horse does not much improve, bandage the limb firmly flannel and add ⅛ as much Aqua Ammonia to your liniment as you have remaining of liniment and apply in frequency as before, over bandage.

CARIES OF THE TEETH.

This is often mistaken for Glanders and other very disagreeable and fatal maladies, and may be known by fetid discharge from one or both nostrils; food dropping from mouth only partially masticated, or discharged from bowels imperfectly digested. In proof of the oft mistaken diagnosis in reference to this affection we will name two or three of the fatal mistakes of even eminent Veterinarians, in this affection, given by Dr. Jennings, on this important subject, *viz:* One case of a 7 years old horse, killed as a glandered horse in 1853, but discharge from one nostril found to emanate from one carious tooth, of which there yet remained enough to prove the fatally mistaken diagnosis. Another case in point in 1859, of a horse pronounced Glandered, but on examination found two first Molar teeth carious, the result of which was closure of one nostril and formation of an immense tumor on same side of (right side) head. Both foregoing cases were found in one of the dead yards of Philadelphia, Pa., where those unfortunate victims are accumulated to extract, by boiling, whatever oil they may possess; to which we might add many instances as fatal to owners, through the same kind of oversight, or ignorance of Veterinaries, or stupidity or carelessness of owners.

TREATMENT.

In short, is to avoid all the consequent calamities, by careful examination, which only can lead to correct diagnosis; which will invariably

lead to the only correct and decisive practice—which is, always to extract each and every decayed tooth at once.

N. B.—I might cite two cases corroborative of the above cases by Jennings, in my own practice, but have not the space required in this little work.

INFLAMMATION OF THE KIDNEYS.

Many causes are assigned, among which we will give the following: Strains over region of the kidneys, cold and heat.

SYMPTOMS.

Some increase over natural heat; disinclination to move, and tenderness to pressure over kidneys. His head is attracted to the side as though in misery; stands with hind legs wide apart and straddles as he walks; urinates in small quantities, with a mixture of blood; the attempt to urinate becomes more frequent, and the animal strains violently, the quantity being continually smaller. While the pulse in first stage was not greatly changed from normal in firmness, it is now greatly quickened, often rising to 100, but weak and feeble.

TREATMENT.

Where the horse is young, fat and strong, bleed on the first to third day, from 1 to 2 gallons, from jugular vein, according to age, size

and condition—but never bleed an old and feeble horse—and give three times per day, Fluid Extract Buchu ½ ounce, Balsam Copaiba in 1 pint soda water, and apply mustard and vinegar over kidneys. While there is much fever give 20 drops Tincture Aconite, on the tongue, every two or three hours. Friction to the limbs and bandages are recommended by some, and keeping the body well blanketed. After having used mustard and vinegar to the extent of producing some counter irritation over the kidneys, apply poultice of hops and vinegar over same parts, or what is about the same thing in virtue, is to make a strong tea of hops and poppy leaves and seeds and wet woolen cloths in that liquor, with some vinegar added, while the tea is about as hot as the hands can bear, re-wetting as often as they cool off. We must now warn the attendant that the bowels must not be neglected, which must be moved by Sweet Oil, Linseed Oil or Glauber Salts, after which give injections of Tobacco, Laudanum and Slippery Elm, repeated as occasion requires. Give mucilaginous drinks, with heaping tablespoonful of soda to each pailfull drank. Bran mash and flour gruel diet, with best of nursing.

Catarrh, or Cold.

Is of frequent occurrence, and may end seriously, if not attended to timely.

Symptoms.

The ordinary symptoms are, pulse somewhat quickened, some discharge from nose and eyes;

rough coat, poor appetite, and more or less cough, which if neglected, often becomes serious, if not dangerous.

TREATMENT.

Give Aconite 30 to 40 drops in a little water, as often as necessary, at intervals of two hours, keeping horse well blanketed in comfortable stable. Nurse carefully and feed bran mashes. If there is much inflammation of the throat, use liniment of Aqua Ammonia 2 ounces, Oil Origanum 1 ounce, Camphorated Spirits 1 ounce, Spirits Turpentine 1 ounce; use 3 or 4 times each day, by bathing well under throat and about the jaws; or make a thick mustard paste by scalding the mustard with just boiling water enough to wet it, cover and let steep 5 or 10 minutes and add just vinegar sufficient to form a paste that will adhere to the hair and skin, with which daub well under throat and about the chest repeating as often as necessary. Continue bran mashes and give the horse flax seed tea to drink—and with good nursing he will soon recover.

STRANGLES.

This is known by soreness of throat and stiffness of neck, followied by swelling of throat and under jaw. The mucus membrane of nose is more or less inflamed and some discharge; swelling so great sometimes as almost to suffocate, with very little appetite or disposition to drink.

Treatment.

If through persevering use of following liniment you cannot prevent abcess, *viz:* Aqua Ammonia, Spirits Turpentine, Alcoholic Spirits Camphor, of each 2 ounces, well united, and thoroughly tried, proceed to poultice at once with bran or corn meal, changing every 4 or 5 hours, until it points towards knife or breaks. Let your medicine after suppuration is established be plenty of good nourishing feed and good nursing —tonics inclusive.

Crib-Biting and Wind-Sucking.

I think this is oftener the result of hunger than from any other cause, if not than all the combined causes; but will not stop to discuss the causeology, but proceed to its remedies.

Treatment.

As this long continued habit almost invariably impairs the digestion and consequent usefulness of the horse, it is highly important first to say to the stock grower to never allow his colts to run dry or hungry, from the fact that cribbiting and wind-sucking are always the result of abuse or neglect of this noble animal in the domesticated state, and a thing unknown to the horse in his native state. But where this unhappy practice has been acquired, cover all catchable objects within his reach with sheet iron, and place a revolving roller above the front of the manger, just

within his reach, so that his teeth will slide off whenever he attempts to grapple it, and leave nothing to lay hold of within his reach, but plenty of feed and drink.

Spasmodic Action of the Diaphragm (Thumps).

This is brought on by working the horse until unstrung, nature alone not possessing nervous energy enough to restore the system to natural action, the arterial system becomes uncontrolable.

Symptoms.

A sudden jerking and twitching of the muscles, particularly of the sides and flanks; pulse wiry, hurried and low, more or less fever, extremities natural.

Treatment.

This disease being spasmodic in character, but in this case of a nervous nature; and consequently the remedies must be such as to allay nervous excitement. Give Tincture Digitalis 30 drops, Tincture Assafoetida 2 ounces, both put into ½ pint warm water, and repeated if necessary every two hours. Keep horse warm; feed bran mash and grass if in grass season.

Bleeding.

In general, if not almost universally, bleed from jugular vein in following manner: Shave the hair off about the size of a dime, 3 or 4 inches

below the angle of the jaw; take spring lance with a large phlegm, and as soon as the vein is made sufficiently prominent by bandage around the neck, just below point selected for bleeding, or tightly pressing your finger upon the vein and placing phlegm of lancet lengthwise with vein, make a large and free opening, that the blood may be quickly extracted. When the desired quantity of blood is taken, bring the edges of the opening together with thumb and finger, and pass a sharp pointed pin through them, and with a thread or tail hairs, wind between the pin and tail hairs until the opening is closed up. Do not bleed from same opening beyond four or five hours afterwards, but open in another place.

PHYSICING.

Preparation of the system through bran mash a day before giving the horse physic is claimed to augment the effect of any given cathartic medicine, and likewise, is not so liable to excessive action on the system. If the horse appears to be enjoying good health, and has a good appetite, however, I always question seriously the practice of giving physic, my theory being that nothing is needed with the sound, healthy, good feeder, but plenty of good nourishing feed, and good care to loosen hide, when tight, as you must know that when the horse gets very thin in flesh, every part of his system naturally and comparatively contracts (stomach and intestines as well), and that when the horse that has always

been thin in flesh, in the hands of the sparing keeper, changes to the stable of the good keeper, you very soon find his hide loosening without any medicine, but that found in every well supplied granary. It has been the theory of a great many excellent stock growers that it is better for the horse to be allowed to run down in flesh at least once a year, and there is no doubt whatever that from man to the most minute of the *biped* or *quadruped*, that the more fleshy, and the longer they remain in that particular state, the more indolent they naturally become; particularly with brutes, where nature alone, and not the force of circumstances, or ambition to acquire wealth steps in, and impels to physical energy. But if actually requiring physic, give the horse by drench in as little water as will dissolve from ½ to 1 lb. of Glauber Salts, repeated as often as necessary, or Barbadoes Aloes, from 1 to 2 ounces, according to age and size, repeating dose as often as required.

Bots and Worms.

The former of these (Bots) has in all former ages been considered one of the direst calamities that has ever infested the horse; and there is probably nothing in all the round of natures ills less understood than this subject, which by men of the greatest science and research of the present day are considered harmless, unless accumulated in such numbers in the stomach as to impair digestion; and we may say of worms, tha

farther than the nourishment they naturally absorb, they can only prove dangerous when concentrated in such quantities as to form ganglions (or knots) which have been known, even to clog up the natural passages.

Symptoms.

A rough and dull coat, and often an irritable state of the bowels, followed by discharge of mucus, accompanied with colicky pains, and the animal presenting a general thriftless appearance.

Treatment.

Give the horse, in feed of midlings, or chopped grain, night and morning, a ½ drachm of Black Antimony, with one or two heaping tablespoonfuls of Epsom Salts and a hand full of salt, or give the salts in his drink and the salt on his feed, or in his feed trough between feeds. About the second or third day if worms and bots are not passing away, take of Barbadoes Aloes 3 drachms, and Assafoetida 1½ drachms, dissolve and rub down as fine as possible in 1 pint of warm water, adding 40 drops of Oil of Malefern and ½ ounce of Turpentine, repeating the dose each night and morning for two days, and on the morning of the third day give a pound to 1½ lbs. Glauber Salts (according to size of horse), repeating same practice if necessary.

Pneumonia.

This oft fatal disease, unless correctly diagnosed at once, and as promptly and decisively

treated, will assuredly prove one of the most fatal of all diseases of the Horse, as well as its victims among all animals.

Symptoms.

The appetite dull, not inclined to move, pulse about 50 and weak; a little appearance of inflammation of the mucus membrane of the nostrils, and only just perceptible irritation of that of the eyes; urine scanty and highly colored; the discharges of the bowels hard, and contain considerable mucus. After a few days the mucus membranes of the nose and eyes are more inflamed; pulse hurried; discharges from one or both nostrils; respiration more hurried. From sixth to eighth day a copious flow of urine, which is more transparent and watery; legs swell, and there is a dropsical secretion under the belly, after or during which, the horse may have lameness in one fore-leg, which may be followed by lameness in the other.

Treatment.

Is to cure with the least possible reduction of natural strength. Give Aconite, 30 drops on the tongue every two or three hours, and Emetic Tartar in his drink, two or three times each day, in 1 to 2 drachm doses, according to age size and condition. Let his drink be Slippery Elm or Flax Seed tea, as often as he desires; keep well blanketed, and feed bran mash, or chopped wheat in the same way. If the treatment above named does not allay the inflammation use a strong mustard paste under throat, along down the neck and breast and back of fore legs, rubbed well into the hair, or the following liniment

Aqua Ammonia 2 ounces, Turpentine 2 ounces, Strong Spirits of Camphor, (Alcoholic Spirits of Camphor) 1 ounce, and Sweet Oil ½ ounce. Shake thoroughly together and apply over same parts as directed for application of mustard.

N. B.—It looks somewhat barbarous, but I have in cases neglected (until it had resolved into kill or cure at a single dose or application) wrapped the animal in a blanket doubled 3 or 4 thicknesses and blistered at once, by pouring boiling water under blanket into the hair—establishing counter-irritation and thereby saving the horse.

SURFEIT.

Is a disease resembling very much, Nettle rash in children, and is ascribed to derangement of the digestive organs.

CAUSES.

Among its common causes are cold water in excessive draughts; sudden changes to indigestible food, but often comes on without any apparent cause—occurring more frequently in the spring and fall—sometimes prevailing as an epizootic. Tumors about the size of small beans, containing watery fluid, are found over the body or limbs, causing intolerable itching, but, contrary to other skin diseases, in general, are not contagious.

Treatment.

Purge well with Glauber Salts, and feed condition powders, a tablespoonful twice a day, or powdered Hyposulphite of Soda, a teaspoonful three times a day, and wash three times per day with salt water, made not very strong.

Jaundice, or Yellow Water.

Is known by yellowish appearance of skin, occasioned by the bile not being properly carried off, but is absorbed by the cutaneous vessels —thereby impregnating the whole superficial system; the skin, flesh, and every part if discernable would be found overcharged with biliary matter.

Symptoms.

The white of the eyes, nose and month, will present the first symptoms, as well as seen in the urine. Previous, however, to the above positive signs, it may be observed that the horse is dull and indolent in his movements, and when standing droops his head forward, becomes weaker and weaker; eyelids close and he shows less disposition to move, reels, and sometimes falls, in attempting to walk; pulse faster, disturbed respiration, bowels costive, and urine through the whole course of the disease, scant and yellow.

Treatment.

If in grass time, turn the horse out where he has a mixture of dandelion, and if not improv-

ing on this treatment, give Podophyllin 1 scruple, and Glauber Salts ¼ lb., repeating dose twice per day until the bowels are relaxed, after which give just often enough to keep up relaxation; likewise Acetate of Potash in drink, or drench to the amount of 6 drachms to 1 ounce per day according to age and size.

Plejritis, or Pleurisy,

This is brought on by about the same causes as those producing Pneumonia, and not necessary to repeat them.

Symptoms.

Serous membrane lining the chest, called pleura, (which covers the lungs), is the part particularly inflamed in this disease. The principal symptoms are shivering, hot mouth, and other signs of fever; disinclination to move; rapid, firm, corded pulse; an occasional short, painful cough; hurried, shallow, careful breathing, sometimes followed by sigh or grunt. To shield this thin and delicate membrane (the pleura) when inflamed, the belly is drawn up as a bracing palliator—bracing against the painful vibrations upon that membrane in every act of respiration. Pressure between the ribs gives pain, and application of ear, just back of fore-leg, discovers a rough, rasping sound. The horse frequently looks round at his sides during first few days, paws, and breathes jerkingly, but after three or four days appears easier and more cheerful.

Often however, about this time or a day or two later, the hidden mischief is developed in serous effusions from the blood to the Thorax, and ere long that cavity is filled with watery fluid; the breathing is now short and labored, with flapping of nostrils; lifting of the sides; small, irregular pulse, and swelling of the legs. If the chest is not so full as to threaten suffocation, and through diuretic means the water is passing off, and chest disgorging, the animal may recover, but the chances of recovery are very doubtful.

TREATMENT.

In the inflamatory stage the same as in pneumonia, with the addition of Nitre given continually in the drink of the pleuritic victim, with a little tincture Digitalis. Nitre 1 drachm, Tincture Digitalis 20 drops to each pail of water. In some stubborn cases the fluid is obliged to be drawn off by tapping, in which operation the Trocar is introduced between seventh and eighth ribs. But if the breathing is improving and the horse apparently better in every way under use of Nitre and Digitalis, do not tap, but rely on nature and nursing.

BROKEN WIND,

HEAVES, AND PULMONARY EMPHYSEMA.

All of the above names stand for a structural malady, evinced by two expirations to one inspiration; with a hollow, muffled, or apparently suppressed cough, and on lowering days, and such as possess but little vitality, you will

always find symptoms most aggravated, and know at once by dilatation of the nostrils; violent heaving of the flanks, ribs and abdominal muscles, which are all brought into action through the double expiration. It is claimed that this disease (or rather complication of diseases) is brought on by over-distention of the stomach and consequent pressure against the diaphragm, which presses upon the Lungs thereby occasioning rupture of the air cells, and must unavoidably bring on some form of the above complication—which, when it presents in the form of Heaves—may be cured if on their first appearance the horse be put upon wet feed, or turned out to grass, without any use whatever until entirely free from cough. I have seen one or two breeds of horses that whenever they took the distemper while young, were sure to come out of it with broken wind; which proves, I think that there is much more in hereditary taint than is generally imagined. If we can confidently offer one single plan for the cure of Heaves, I am satisfied that it rests alone in turning the animal into a low ground pasture (if in grass season) or if in season of dry feed, only give corn blades, clean straw, marsh or timothy hay as fodder, (well dampened in every case) and not too much of any kind—observing strictly to tie in such position that he cannot get down to his bedding, nor possibly get to any dust (which must be scrupulously swept out of reach daily) and give him cut and ground feed, always well wet and allowing no one to use him until you have persisted in any or all of the foregoing means at least three or four months, by which time if not improved his case may be set down among the hopeless.

DIARRHOEA.

This may be caused by any indigestible substance taken into the stomach, and likewise by change of drink—as from soft to hard water. Certain breeds of a loose and gangling make, and old and worn out horses in particular, are undoubtedly more prone to this, as well as scours, than the firm and tightly made horse, and may I not say more liable to all diseases and blemishes. Green food taken in excess, of certain kinds, and likewise from general debility brought on by other diseases.

SYMPTOMS.

Frequent discharges of thin, watery stools, and not always in large quantities; attended often, but not always, with more or less pain and griping. It is often natures plan for driving out irritating and injurious matter from stomach and bowels—which if left to ferment—is liable to carry away mucus coating of stomach and bowels, thereby making them an easy prey to every irritating substance.

TREATMENT.

If there is much straining, and but little discharge, give ½ pint of Linseed Oil, with ten grains of Valerianate of Morphia, repeating same dose in 5 or 6 hours if not relieved. Should purging be violent however, accompanied with much apparent distress—take Valerianate of Morphia 10 grains, Extract of Logwood 2 drachms, and Tannin 15 grains, in 1 pint flax seed tea; repeat-

ing and doubling either of above doses if the symptoms demand. When a great amount of mucus is being discharged, and inflammation is apprehended in the case use my counter-irritant liniment, *viz:* Spirits Ammonia 2 ounces, Alcoholic Spirits of Camphor 2 ounces, Turpentine 2 ounces, and as soon as well blended by agitation, saturate the body over stomach and bowels, repeating two or three times per day, keeping covered with oil cloth to prevent evaporation. Nurse carefully and feed a little rye bran, two or three times per day, with the marsh or timothy hay the horse will eat.

LAMENESS IN THE COFFIN JOINT.

Probably there is no lameness that ever affected the horse, so dark and baffling to the horseman, and even to the skill of the scientific and experienced Veterinarian, as this most blind and insidious disease. This joint is composed of three bones:—Os Pedis, Navicular and Small Pastern bones, in which are seated this lameness, which is known by the horse walking by purchasing upon the sound limb, and only touching the tip-toe of affected foot, in which the inflammation has sometimes run so high as to bring about suppuration and anchilosis of that joint. In cases protracted, the frog is almost obliterated, and where the cause of lameness appears positively in that joint, pick up the foot and move it every possible way, to learn what particular motion gives most pain, and there is no one test

that is likely to develop so much knowledge of the positive seat where Navicular lameness is suspected as twisting the foot in your examinations, which will cause more or less flinching in this affection.

Treatment.

Raise heel of shoe, and keep foot wrapped in heavy cloth, saturated with Alum or Sugar of Lead water, 1 ounce of either to 1 gallon of cold water, binding on cloth so as to completely cover the coronet, or keep foot confined in broad, flat box, made water tight, and continually submerged in cold water. In cases of long standing, counter-irritation by means of liniment composed of Ammonia 2 ounces, Turpentine 1 ounce, and Alcoholic Spirits Camphor 1 ounce, may be strongly applied and often repeated over the coronet. Blistering however with the fly preparations of the shops have proved more effective sometimes than all other means; and cases of slight, but long standing lameness of this kind, have often recovered on slow, careful use, after all advised means had apparently failed altogether.

Pnasarca, or Dropsy,

May embrace the limbs, skin, and external parts only, or in other cases may take in the whole system; and is known by more or less swelling of the limbs in some cases only; while in others there is a general accumulation of watery fluid

in the whole cellular tisssue of the muscular substance, not only (that is in all the minute cavities of the flesh) but, likewise, taking in the cavities of the chest and abdomen.

Symptoms.

Distension of the belly; sometimes rather loose and flabby, while in other cases it is hard and tense. Accumulated state may be discovered by placeing the hands on abdomen, alittle apart and pressing down with both alternately, and where the fluctuations are at once discovered under the fingers. Percussion produces a dull dead sound instead of the lively drum-like resonance of the bowels. Urine scanty; impaired appetite and digestion; deep and excited breathing; growing steadily worse in condition; hair dry, rough, erect and often shedding; swellings along lower part of body, embracing chest and limbs.

Treatment.

Where true cause is founded in general debility, through impoverished state of fluids, the various preparations of Iron, Fowler's Solution, &c., must be used, in connection with the most active diuretics; such as Digitatis, Pulverized Squills, Oil Turpentine, Iodide Potassum and Nitre; in heavy doses as can be borne, in chopped rye or wheat, or in drink, or by drench, as case may demand. Added to foregoing, give plentifully of Salts; feeding him plenty of Burdock and Dandelion and turning him out to grass if available.

Bronchitis.

Is an inflammation of the mucus lining of the Bronchial tubes, and, while often a result of other diseases, (those of the lungs), it unfortunately often presents in an original and formidable shape.

Symptoms.

Irritation and very annoying tittilation in Bronchial regions; a disagreeable painful cough; hurried breathing; short, quick pulse; and is often accompanied with a rattling sound which is readily discovered on placing your ear at the side of the chest just behind the fore leg.

Treatment.

Place in a well ventilated stall that is not subject to sudden blasts of piercing air, if in winter, but, if in summer keep him in the coolest and most airy stall the stable contains; only observing strictly that it is not impregnated with a damp air. If the horse has much fever give 1 teaspoonful of Tr. Aconite and Sweet Spirits Nitre in equal proportion every hour until febral excitement subsides; apply paste of Mustard and Vinegar by rubbing well in the hair over bronchial region, and, likewise over the chest where there is any apparent threatening of pleura or lungs. Clothe the horse according to state of atmosphere, and, should he be growing weaker, give 1 ounce of Sweet Spirits of Nitre and the same quantity of Aromatic Spirits of Amonia 3 times per day in ½ pint of cold water.

Give strictest adherance to all the foregoing directions, nursing and pampering appetite to the uttermost with the best and most nourishing food.

Hydrothorax. or Dropsy of the Chest.

Is a disease where the natural food failing to be properly nutrified, aquified, and the result is accumulation of watery fluid in the throacic cavity; and when positively indicated by the following symptoms very rarely, if ever, curable; viz: Animal standing straddled; the breathing short and quick; as the accumulation increases breathing more labored; pulse small and quick; staggering gait; breast, belly and sheath swelled leaving impression or indentation from pressure of the fingers; application of the ear to the side discovering no gurgitations or rattling sounds.

Farcy

Is often regarded as the forerunner of glanders, and while set down among the curable affections it must not be neglected too long or it is certain to end in the same terrible disease. It has been satisfactorily demonstrated that Farcy may produce the Glanders and Glanders Farcy.

There are two varieties of Farcy: the first of which we will style Button Farcy, confined to the lymphatic vessels of the skin and readily yields to medical treatment; the other variety appears on the extremities, and, generally, on the outside of hind legs which become completely engorged. The swelling, or eruption, in this stage is very uneven and lumpy, excessively tender and painful to the touch. If neglected small abscesses are formed, and, if not speedily arrested, soon cover the whole body, when they very soon, if not already, defy all skill.

Treatment.

The treatment recommended is Sulphate of Copper 2 drachms combined with the same amount of Fluid Tincture of Gentian. Should foregoing not succeed in a short time, try Corrosive sublimate in 10 to 15 grain doses two or three times per day, which doses have been advantageously increased to a scruple or ½ drachm dose. If much debilitated give Calomel in ½ drachm doses instead of Sublimate, or Sulphurate of Mercury may be substituted. The use of Arsenic has been highly extoled, but Muriate of Baryta in ½ drachm doses most successful of all. If he will not take medicine in his drink, dose in one pint of Flaxseed tea. Open tumors timely, and dress twice per day with Mercurial Ointment. Rub inflamed parts with the same Ointment as often. Feed good nourishing diet, changing to grass if possible, with unwavering attention if you expect or wish to save your horse.

Bronchocel, or Goitre.

Is an enlargement of thyroid glands immediately under the jaw, and is attributed to the Lime and Magnesia contained in the water where most prevalent, It is often found in New York, Pennsylvania, and all states or districts where the waters are impregnated with the forenamed principles.

Symptoms.

The horse presents two distinct enlargements in this disease, which are frequently greatly augmented in horses of poor keepers. The weaker part in horses, as well as man, always being to reflection of other diseases. The swelling is at first soft, gradually becomes firm, tense, resistant, and if cut into is found, in many cases, even gritty.

Treatment.

Give rain water to drink, and use Iodine freely on an empty stomach, and likewise over the swelling. Weak solutions may be ejected into the tumor by means of the Hypodermic Syringe.

Glanders.

Is, and has, in all ages been considered (if possible) the most fatal and loathsome of all

diseases, and so contagious in its nature as to render it the terror of all horsemen. It is so contagious in its nature as to even endanger the human species.

Symptoms.

Discharges from one or both nostrils of a thick glossy nature, frequently adhering to the nose in considerable quantities, but discharges not always profuse as might be inferred; and the Schneiderian Membrane, or lining of the nose, always becomes of a dusky, leaden hue; ulcers appear upon the membrane; a remarkable raising of the nasal bones, observed in no other affection; one, or both, of the submaxillary glands enlarged and adhere to the jawbone. Too much reliance must not be placed on above named swelling however, as the same (or much similar) enlargement may often be seen in other diseases. This is one of those terrible maladies that has in all ages past, and, we greatly fear, will in all the future continue to not only baffle but to defy all the science and ingenuity of the Veternary world. No treatment.

Epidemic Cerebro Spinal Menengetis--Cebro Spinal Fever.

Is characterized by inflammation of the substance and covering of the brain and spinal cord in horses. Sometimes prevailing extensively in livery stables or cities from cause acting gener-

ally, while true cause is unknown. In many cases debilitating conditions, like unwholesome food or water; overwork; sudden exposure to intense heat, or suddenly induced plethora will serve as immediate excitants of the morbid process. It may occur alike at any, or every, season in this country; but has never been identified in Europe.

Symptoms.

Are varied according to the case. Some are seized suddenly with cramps of the voluntary muscles, especially those of the neck and hind limbs, which soon give place to general palsy of motor and senory. In other cases, the onset is slow. There may be trembling, dullness and lassitude for some hours, or days, or some local paralysis, like that of the throat or lips, incapacitating the animal from swallowing liquids, or causing profuse slavering. But sooner or later in all cases alike, paralysis sets in and the animal is barely able to support itself, or, if worse, lies prostrate on its side, with limbs extended and placid. If the case is to prove fatal, coma and confirmed stupor usually precede death. But, if instead of foregoing fatal symptoms the appetite is preserved throughout and restoration of the general health precedes the disappearance of palsy, sometimes by several months. The pulse throughout is little varied, being usually slow and soft at first, and weaker and more rapid as the disease advances. Breathing, at first little affected, becomes deep and stertorious as coma sets in. The surface temperature is cool, and that in rectum usually natural. The bowels are generally costive; urine unchanged, and may

pass involuntarily. Tenderness of the spine may sometimes be detected by percussion, and will guide to the positive seat of the disease.

Treatment.

The judicious practitioner must be prepared to judge from symptoms whether the case is susceptible of treatment, and I have in cases apparently hopeless, entirely at first sight, found nothing so efficatious as the copious use of Turpentine or Aqua Amonia about the top of head and along the course of the spine, and in any extreme case I should not fail to try the efficacy of Strychnine externally, in combination with Ammonial frictions along the spine, but likewise give it in grain doses in combination with Sulphuric Ether and Tincture of Capsicum, each 1 drachm, in 1 pint of Flaxseed Tea three or four times per day. Should the horse's appetite be very poor, and strength declining, add 30 grains Quinine to each above described dose, and where the above remedies fail and great nerve prostration exists I would advise the use of the Galvanic Battery. Should the pain be severe use Sulphate Morphia or Chloral-hydrate; and in the earlier stages give Bromide Potassium and Fluid Tincture of Ergot. And right here let me say that where the power of deglitition (or swallowing) is lost always resort to the stomach pump, Hypodermic treatment, or injections, as the case may require. In addition to the foregoing treatment in cases of great loss of power it may be necessary to give Whisky or Brandy in doses of ½ pint every 2 to 4 hours in a pint of Flaxseed tea; end in cases of extreme prostration add Fluid Tincture of Nux Vomica, one drachm, to the

quart. If the horse can swallow well and has a reasonably good appetite, give him chopped wheat, oats or rye, with a handful of Flaxseed Meal, or Oil cake in each feed.

Retention of Urine.

Always caused by the contraction of the sphincter muscle of the neck of the bladder, or mechanically, through stoppage by stone or gravel at neck of bladder or actually lodged along the course of urethal passage.

Treatment.

The immediate relief (introducing hand into the rectum) being an unpleasant operation, we will first make trial of the following diuretic preparation: 2 ounces Sweet Spirits of Nitre to 1 pint of New Milk, repeating often as necessary in conjunction with fomentations as follows: ¼ to ½lb Saltpetre dissolved in pail of boiling water into which dip flannel cloths, or woolen blanket, and apply over kidneys hot as can be borne re-saturating often as it cools. If the horse fails to urinate in an hour or two after using the the foregoing remedies, introduce the catheter of as large size as can be introduced and draw off the water. But if suitable catheter is not accessible, grease the right hand well with lard or oil and insert into rectum, immediately under which lies the bladder, and, if full, press gently on it, and if only impediment is iritation of neck of bladder the difficulty may soon be overcome, but if stoppage

originates through stone or calculi the only cure is to remove it by an operation which of course will require a skillful veterinary surgeon. After urine is drawn off give fluid extract Buchu ½ oz.; Balsam Copavia 2 drachms in ½ pint of warm water or new milk, after which turn to grass if the available season.

SPASMODIC CHOLIC.

Is frequently sudden and violent in its attack, with pulse rarely much quickened in the opening of the disease; legs and ears about natural warmth, and, if at work, the horse suddenly slackens his pace and lies down; gets up and paws; looks around at his side; often placing his nose to one or the other flank alternately; and to every appearance, in the greatest apparent misery.

TREATMENT.

Do not let the horse throw himself violently, as he is not only liable to bruise himself badly, but, if very much bloated, has been known to rupture his stomach through such violence. Give as a drench Hypo Sulphate of Soda 1 oz., Laudanum 1 oz., Aromatic Spirits of Ammonia ½ oz., Tincture Aconite 20 drops, in ½ pint warm water. In severe cases there may be frequent slight evacuations of the bowels, but it must not be inferred from this fact that he is growing better, but that a disease hidden and lurking is fast preying upon his vitals. Repeat above dose if

not easy every 20 or 30 minutes until the pain is relieved, omitting Hypo-Sulphate Soda after second or third dose, but double or thribble the amount of Laudanum if necessary. As soon as pain is relieved give him 1 pint Flaxseed Oil by drench, and bountiful injections of Castile-soap suds and fresh lard; keeping him in gentle motion between doses, as that will aid in moving the bowels and worry the horse less than his exertion in getting up and down, which he is sure to do while in pain unless kept in motion. All that is necessary after relief of pain and moving bowels is a little rest and good nursing, unless neglected until the mucus coating of the stomach and bowels have become inflamed, which is known by mucus found in discharges from the bowels when too much care cannot be observed in diet and in every possible way.

Hoof Bound.

Is a general contraction of the foot which particularly affect the foot at latteral angles of the frog or heel, particularly when the horse has been kept a long time on a dry plank floor in hot dry weather, or cold dry weather, wearing the same shoes until the natural growth of the circle of hoof brings the bearing of the shoe within the rim or shell of the foot. This affection is undoubtedly, more or less, hereditary in certain breeds of horses where the foot is entirely in disproportion to the body (being small and crampt) while in others it is frequently brought

on through some of above causes, or by sympathy with other diseases: as shoulder affection, those of the limbs, etc., etc.

Treatment.

First remove the shoes (if shod) and, if obtainable, turn him out in low wet pasture, or keep him standing in water-tight box filled with water deep enough to cover the coronet, which will promote the growth and consequent spread of the foot, and a general healthy action. If convenient let the horse be tied in some comfortable place where his feet can be placed in a pool of water an hour or two at a time, two or three times per day, between feeds, in warm weather; poulticing affected feet every night. In cold winter weather I do not think this affection can be so favorably treated in any way as to envelope the foot with cushions saturated with the Oil of Turpentine or Organum; resaturating as often as absorbed. Where neither of foregoing are available, use Kerosene. If, in warm weather, however, I think the turning of the horse on low-ground pasture equal, if not preferable, to any of plans of treatment ever yet offered for cure of this affection.

Rheumatism of the Breast.

The horse presents a tottering, crippling gait; breast more or less sunken between the shoulders and to some extent enlarged, enough to be noticed by an ordinary observer. The disease is

sufficiently marked to be readily recognized, and generally pronunced uncurable by pretenders to the Veterinary Art throughout the country. It is known by different names throughout the country, such as Chest Founder, Broken-down, Stoven, Stove-shoulders, and by whatever name it may be known, in the various localities, it is pronounced alike incurable. It is the result of founder, but not the severest type of founder that causes it.

Treatment.

There are two conditions of the parts affected in this disease, quite the reverse in character. While the muscles of the breast are shrunken, or attrophied, the shoulders are enlarged,and where the following liniment does not, in a week or ten days, produce a favorable change, *viz:*—Aqua Ammonia 4 ounces; Spirits Turpentine 4 ounces; Oil Origannum 2 ounces; Choloroform 2 ounces, any quantiy (in forgoing proportion) applied with with rough sponge, with considerable friction, morning, noon and night. Put in six seatons: 2 in front, one above, just under the neck, and the other below; and place the others at equal height on each side. If there is much fever and pain give Aconite 20 drops, and Valerianate Morphia every 2 to 4 hours; and feed bran mash and middlings, and green grass (if in season for cutting grass,) Keep the horse in dry well ventilated stable, if in summer, and, if in winter, you cannot keep too comfortable. Always blanketing thoroughly for fear of translation to the heart; that often being the doomed victim of translation of that painful affection when the general strength has become greatly

impaired, and arterial action correspondingly weak. Merely keep the bowels free from constipation in this disease, and that without physic if possible.

RECIPES.

To Take Down Swelling of the Legs and Strengthen the Tendons, After Hard Driving.

Take 1 pint Alcohol; 1 oz. Beef Gall; 1 oz. Oil Organnum; 1 oz. Oil of Spike; 1 oz. Gum Myrrh; ½ oz. Gum Camphor; put all into a strong quart bottle, and agitate until all the ingredients are dissolved; wash the limbs with Castile Soap and warm water, and when about rubbed dry apply the Liniment, rub dry and bathe again well, and bandage with firm Flannel bandage, but do not draw bandage so tight as to impede circulation. Repeat same process until the limbs appear all right.

To Rectify a Hide-Bound Horse—or One Apparently in General Bad Health.

Take Nitrate Pottassa (Saltpetre) 4 ounces; Crude Antimony 1 ounce; Sulphur 3 ounces. The Antimony and Saltpetre must be well pulverized; then add the Lulphur and mix all thoroughly together. Administer 1 tablespoonful night and morning for a week or two in bran mash, letting the horse to grass through the day,

if in grass time, and if in the winter let the horse out in barnyard in pleasant weather.

A Lice Exterminator on Horses.

Put 1 oz. of Arsenic to 1 pail of soft water; wash the horse all over, by saturating a sponge in the wash, observing to first place the animal in a warm stall, if not already occupying such a place. It is probably not generally known that both Chicken Lice and Human Lice infest the horse when brought in contact with them.

To Cure A Chronic Cough.

Take pure Alcohol and put all the Oil of Tar it will dissolve and add one-third in weight or measurment of Tincture Belladonna. Give the horse 1 tablespoonful morning and evening in convenient way.

Condition Powders.

Take Sulphur two pounds; Nitre one pound; Fenugreek 4℔s; Cream Tartar 1℔; Licorice 1 ℔: Black Antimony ¼ ℔ Gentian ½℔; Aniseed ¼℔; Murate soda, or common salt, 1 ℔; mix all the ingredients thoroughly together, and give the horse of ordinary size a tablespoonful night and morning. If you do not wish to make as much at once, be strict as to proportions.

Remedies for, and Treatment of Cuts and Wounds.

If wound is large and gaping, put in reasonable number of stitches far enough back from the edges that they can not so readily slough out.

Among the remedies for allaying inflammation is, Tincture Calendula (or Marigold), and it is set down as unrivaled. The following lotion is highly celebrated: Tincture Myrrh 1 oz.; Tinct. Aloes 2 ounces; diluted in ½ pint water, and apply 3 times per day. As a wash for old ulcers, use Blue Vitriol 2 drachms to 1 pint water with which cleanse the ulcer once or twice per day; but if the sore be infested with fungus (proud flesh) sprinkle with dry Calomel once or twice each day. As a healing ointment prepare as follows: 2½ lbs Palm Oil; 2 lbs Lard; ½ lb Gum Turpentine; ¼ lb Beeswax; 1 lb Calamine; simmer over slow fire until all the ingredients are well blended, after which, soon as cool, it may used.

Wash for Reducing Inflammed Wounds.

Take of Sulphate Zinc 1 oz.; Crotus Martas 1 oz.; Sugar Lead ½ oz.; and 1 pint of water. This wash is disinfectant as well as calculated to allay inflammation. As a preparation for Thrush or Canker: Take Burnt Alum 4 ounce; Sulphate of Iron 2 ounces; Sulphate 1 ounc Camphor 2 drachms; mix and apply once twice each day.

A Wash for Fresh Wounds.

Take of White Vitriol 1 Tea-spoonful, and one of Copperas, and 2 of Gun Powder; put into 1 quart of boiling water, and shake thoroughly together and it will be ready for use soon as cool. In superficial, it may be applied with soft linen or muslin swab; but deep wounds will have to be inserted with a syringe. Use it night and morning.

Liniment for Open Wounds (Highly Celebrated)

Take of Coppearas 1 oz.; White Vitriol 2 ounces; Murate Soda (common salt) 2 ounces; Linseed Oil 2 ounces; Orleans molasses 8 ounces: to all of which add 1 pint of Urine and boil over slow fire about 20 minutes; and when nearly cold add 1 oz. of Oil of Vitriol and 4 ounces Spirits Turpentine, and bottle for use. Apply once or twice per day, with a feather or swab, until the wound discharges freely.

Magic Healing Powder.

Where an ulcer contains proud flesh use the following compound: Calomel $\frac{1}{4}$ oz.; Burnt Alum $\frac{1}{2}$ oz.; mix and use once or twice per day, by sprinkling over the sore. It is important to know that in deep wounds the matter cannot be successfully removed without the use of swab and syringe. Where the mouth of the wound or ulcer is large enough to admit, the swab is first to be used with warm Castile Soap suds; after which use syringe to thoroughly rinse out all offensive matter which may remain. Unless the discharge is very profuse and putrid do not cleanse a wound or ulcer more than once a day. Great harm may be often done by meddling with sores too much, and especially cuts or larcerations which always heal much the sooner by first attentions when possible.

Anodyne Stimulating Liniment.

Take Aqua Ammonia $1\frac{1}{2}$ ounces; Sulphuric Ether $1\frac{1}{2}$ ounces; Spirits Turpentine 1 ounce; Sweet Oil 2 ounces; Oil of Cloves one-half ounce; Chloroform one ounce; put all into a strong bottle, cork tightly; keep in dark

place, keep thickly wrapped with dark paper. This is very applicable in cases where there is much nervous irritation.

The following preparation is also very applicable in Rheumatic affections, Neuralgia, and all affections where palliating frictions to the surfaec are required; *viz:* Oil Turpentine 1 ounce; Tincture Opium 1 ounce; Soap Liniment 1 ounce; Tincture Capsicum ½ ounce. Mix all thoroughly and apply over flannel bandage often as the case seems to demand.

Electric Liniment.

Take of Oil of Spike 2 ounces; Organnum 2 ounces; Hemlock Oil 2 ounces; Wormwood 2 ounces; Sweet Oil 2 ounces; Spirits Ammonia 2 ounces; Gum Camphor 2 ounces; Spirits Turpentine 2 ounces; Alchohol, 90 per ct., 1 quart. Put all into a heavy 2 quart bottle, and agitate thoroughly until all ingredients are dissolved. Use according to severity of the case.

Cough Powders.

Take Fenugreek, Ginger, Licorice, and Bloodroot ¼ ℔ each; Lobelia 4 drachms; mix thoroughly, and give tablespoonful night and morning.

Another Cough Preparation.

Take Emetic Tartar 1 ounce; Resin 2 ounces; Blood root 1 ounce; Salt of Tartar 2 ounces; Ginger 2 ounces. Mix well, give one tablespoonfull just before feeding morning, noon and night.

Wash for Inflamed Legs. Shoulders, or Back.

Take of Sal ammonica 1 ounce; Vinegar 4

ounces; Spirits of Wine 2 ounces: Tincture Arnica 2 drachms; water ½ pint; Mix thoroughly and bathe affected parts often as it is absolved.

A Very Active Blister.

Take 2 drachms Corrosive Sublimate; 1 oz. Lard; Tar ½ ounce; Cantharides 2 drachms. Pulverize the Sublimate and Cantharides well in a mortar, then add Lard, mix well, and at last add the the Tar; and as soon at all the ingredients are effectually mixed it may be applied to Spavins, Ringbones, Curbs and Splints.

A Powerful Absorbing Blister.

Take of Benodide of Mercury and Cantharides 1 drachm each; Tar and lard ½ ounce of each; mix all thoroughly, and apply 3 successive mornings; rubbing in well with the hand each time, and then use lard to soften the scab.

For Sprains and Bruises.

Let it always be kept in mind that the first object to be effected in treating acute inflammation, is to adopt the most prompt remedies. To bring about that effect in the least possible time. Cold water, with the addition of Sugar of Lead 1 ounce to a quart of water, frequently acts like a charm in allaying irritation, or inflammation, arising from sudden, severe strains. Wet the affected part often with this solution, and it may be well to bandage with flannel, wetting bandage frequenttly with the medicine. You may likewise try the following: Saltpetre 4 ounces; Sugar of Lead 1 ounce; Muriate of Ammonia 1 ounce; Common Salt 1 pint; all to be put

into 2 gallons of cold water. Use frequently as above described. Or use the following: Tincture of Arnica 2 ounces; Saltpetre 2 ounces into 1 gallon cold water. All of the three last preparations are very good applications for sprains and bruises, if perseveringly followed up in all such cases.

Farcy Cure.

Take ¼ lb Sulpher; ½ lb Saltpetre and 1 ounce Antimony, and, after blending well together, give one tablespoonful 2 or 3 times per day, according to aggravation of symptoms.

For Cracked Heels.

Take of Alum, Copperas, Resin, each 2 ounces and 1 ounce Beeswax; 1 pint of Tar; 2 ounces of Tallow; boil all the foregoing ingredients over a slow fire, skimming off the filth that rises from time to time, until no more rises. Just before it is cool add Litharge and dry White Lead, of each ½ ounce. Wash clean and apply every second morning. This remedy is likwise highly recommended for scratches, saddle or collar galls, as well as diseases of the skin.

Scratches Cure.

Take 4 ounces Tincture Arnica and same quantity of Glycerine; but if heels are badly cracked, add 1 ounce Iodine: 2 ounces Tincture Myrrh; ½ ounce of Gunpower (finely pulverized) put all into a strong bottle, shake it very thoroughly, and put it on with a swab 2 or 3 times each day. Or use the following: Melt ¼ lb of Bar Lead and mix in Sulphur while

hot, and let them burn together until pulverized, and then add a tablespoonfull of Lard. Cleanse once or twice each day and apply it.

Condition Powders

Take 1 lb Ginger; 1 ounce of Anise seed (pulverized); 1 ounce Fenugreek Seed; 2 ounces of Ginseng Root (pulverized); 2 ounces Sumach Bark (pulverized); and 1 ounce of Antimony. All of which mix with 1 lb Brown Sugar. This is excellent for horses troubled with chronic cough; such as a long standing cold, or that lingering from Distemper, heaves or any kind of long standing coughs, as well as to restore an appetite.

Bovine Department.

THE SPANISH OR TEXAN FEVER.

A disease called Spanish Fever, Texas Fever, and Mexican Fever, has for years past proved quite destructive to the cattle in some localities. In the Northern United States the disease is brought from the South by the droves of Spanish cattle brought from Texas and Mexico. The disease occurs among these cattle, and from them is communicated, either by contagion or infection, to the native cattle. But a curious

fact is that it is not communicated from the native to other native stock. It is extremely fatal. Much attention has been given this disease by the Agricultural Department at Washington, and from the reports much valuable information can be obtained. The author's experience in the disease has been limited to but few cases. Of those treated by him three-fourths most favorably recovered, and he is very confident the treatment pursued will be entirely satisfactory. Texas cattle that have no symptoms of the disease themselves will communicate it to natives. A whole year in the North will not totally remove the infection from them.

Symptoms.

For some days the animal appears mopish, has a dry cough; the ears droop; the nose and mouth are dry; the breath has that smell peculiar to Texas cattle, and flies gather around it more than about a healthy beast. Succeeding these symptoms fever makes its appearance, and reaches its height in two or three days. The ears are very much fallen; the hinder parts reel in walking; the arteries of the neck throb violently; the heat of the whole body is very great; the animal lies down and gets up with difficulty; the breath and exhalations from the body are very offensive. The urine in some cases is mixed with blood, at other times is natural. The bowels may be open or costive. The beast stands perfectly stupid, neither seeking food nor water. The tail will be found hollow for two or three inches from the end, and hollowness of the horns may have taken place. Other cases, after the fever is established, assume symptoms of

delirium. The animal is morbidly watchful; startled at any noise; rushes for whatever appears in its reach. The eyes have a greenish cast, glary and wild; and the beast is at all times found on its feet. In both cases death takes place in about the same time. The Texas cattle, when brought North, are infested with ticks which have their heads so firmly embedded in the beast's hide that their bodies will tear in twain before they let go their hold. The Native cattle that become infected become covered also with ticks. Some have supposed that the ticks in some way are the cause of the disease. It is not likely that this is the case. Its cause is most certainly a poison similar to the contagion of other contagious diseases.

Treatment.

The same as for Lung Fever; which is bleeding and sedative medicines and physicing are the principal treatment. Place the animal in a good, airy place and give the following: Tincture Digitalis 1 ounce; Sweet Spirits Nitre 2 ounces; Tartar Emetic 1 drachm; mix for one dose in 1 pint gruel. This dose may be repeated every three hours until the fever is reduced, giving all but the Digitalis the first dose, and give 1 pound Salts dissolved in 1 pint warm water.

A Recipe for Destroying Ox Ticks.

The following will destroy the ticks which accompany Texas cattle, and are always numerous in case of Texas or Spanish Fever as it is called: Carbolic Acid 1 oz., Water 12 ounces. Or the following: Oil Tar 4 ounces; Linseed Oil 4 ounces; Carbolic Acid 2 ounces; mix well and

apply with a brush. The above will destroy any of the small animals that inhabit horses, cattle and dogs. Also Surfeit and Mange on horses.

Bloat, Hoven, or Tympanites.

The ox, a member of the order, Ruminantia, has four compartments in the stomach, yet two of them are nothing more than dilations of the Oesophagus. The food is first swallowed and becomes macerated in the first and second stomachs. It is then returned for mastication and is passed to the third or fourth stomach for digestion. Anything, therefore, tending to arrest the process of digestion will be liable to cause Tympanites. We will use the term Tympanites, as the proper term, in preference to the term Bloat. The term signifies a distention of the intestines with wind or gas, accompanied by an elastic distention of the abdomen. The latter, when struck or sounded by a blow, sounds like a drum, and indicates a windy distention of the abdominal viscera (a bowel or organ within the body) commonly known as Flatulent Cholic. The direct cause of flatulency and windy distention is imperfect digestion. Instead of undergoing the healthy process of digestion, whereby the food is converted into chyme and chyle, it ferments and evolves gasses, causing putrefaction. Before this period it often happens that the animal dies, either by rupture of the rumen or some of the abdominal viscera. In some cases the animal dies from suffocation, caused by pressure upon the diaphragm. Imperfect digestion may be occasioned by a deranged condition of the digestive organs, induced by various causes. Thus, if a stall-fed lot of cattle be

turned into a cloverfield, or any luxuriant pasture, they not only eat greedily, but eat an amount of food containing aqueous matter, which is not so easy of digestion as solid food, the stomach may not tolerate the change.

Treatment.

Supposing the abdomen to be distended to its utmost capacity, and the animal distressed and oppressed in its breathing, there is no time to be lost; medicines are of no avail. Puncture the flank, on the left side, in its most salient region, by a knife or trochar and camla. Immediate escape of the gas follows and the patient is soon relieved. I now administer the following to arouse the action of the intestines and arrest the fermentations: Hypo sulphate of Soda 4 drachms; Tincture of Ginger 2 ounces; Water 1 pint. Dissolve the Soda in the water, then add the Ginger. If the Tincture of Ginger cannot be had, then substitute 4 drachms of the pulverized root. The medicine may be repeated in four hours if necessary.

Cleansing, or Removal of the After-Birth.

After delivery, the after-birth should be detached, if posible. For, if allowed to occupy the uterus the latter contracts upon it, and it may remain there until it comes away a putrid mass—not, however, without serious danger to the cow. So soon as the calf is born I introduce my hand and pull, in various directions, on the umbilical cord. Failing to bring the placenta away, I introduce my whole arm, and carefully detach the now foreign body from the cotyledons of the

uterus. The uterus shortly afterward contracts, and thus effectually prevents uterine hemorrhage.

Falling, or Inversion, of the Womb.

By this is meant a complete turning of the womb inside out.

Treatment.

Usually the parts can easily be adjusted by making pressure with compresses fastened by strings passing in front to the cow's neck, and by elevating the hind parts it will be found that in the course of 24 hours all will be right.

Mamitis.

Mamits signifies inflamation of the udder. It usually consists of swelling attended by heat, pain, and more or less febrile symptoms. It is precisely similar to the disease nursing women are prone to suffer from. The terminations of this disease, when not early attended to, are suppuration, formation of an abscess, induration, or hardening of the walls of the bag.

Treatment.

Give the animal a full dose of Glauber Salts and apply a refrigerating lotion to the udder, (cold water will answer), in order to reduce the temperature. The milk must not be allowed to accumulate nor coagulate. A metallic tube may be inserted in the teat and allowed to remain there to prevent accumulation of milk. In case of suppuration, a flaxseed poultice should be applied, and as soon as a soft spot is found it should be lanced. In the indurated stage, an

attempt should be made at absorption by the use of Iodide of Potassium in 20 grain doses, and the application externally of Tincture of Iodine.

Hernia, or Ruptures.

Forms of Rupture—Inguinal Hernia—Strangulated Hernia—Ventral Hernia.

Hernia signifies rupture, or an unnatural protrusion of a portion of the intestines, or the omentum.

Forms of Rupture.

When a calf is born with a tumor at the naval it is termed Congenital Umbilical Hernia.

Treatment.

A pad of cotton batting should be fastened over it by a bandage passing around the calf. In a short time the bandage can be dispensed with.

Inguinal Hernia.

This consists in the escape of intestines in the region of the groin.

Treatment.

This can be reduced by raising the animal by its hind legs and giving it a few jerks upward. Should the intestines again slip down I would castrate and place a stitch or two in the external ring, &c.

STRANGULATED HERNIA.

When the intestine descends into the scrotum and cannot be returned on account of some obstruction contained in the intestines, it is said to be strangulated.

TREATMENT.

The ring must be enlarged with probe pointed bistoury, the intestine returned and the animal castrated.

When Strangulated Hernia occurs in any other part of the body, the protruded bowel if tumefied, must be punctured to allow the gas to escape. Then efforts should be made to reduce the Hernia. Failing in this, the wound must be enlarged and the intestine replaced.

VENTRAL HERNIA.

This form of Hernia consists of an escape of a portion of the intestines through a rent in the abdominal muscles, creating a tumor beneath the common integuments.

TREATMENT.

The animal should be etherized. A semilunar incision is made over the tumor. The superficial facia is also divided. A probe pointed bistoury is then introduced between the bowel and edge of the wound. This must be dilated sufficiently to allow of the return of the intestine. The rent in the muscles is then to be sutured and the end of the suture left long enough to hang out of the wound. Bring the integuments together in the same manner. Dress the wound

with Tincture of Aloes. Do not remove the sutures until quite loose.

Horn-Ail and Tail Ail.

The idea as expounded by many so-called Cow Doctors, that there is a disease known as Horn-Ail and Tail-Ail, is terribly absurd. That the temperature of the horn is a drop in the cup that goes to make up a diagnosis, &c., we know to be a fact; but as to being a disease, the idea is too absurd But the temperature of the horn, no more than the temperature of the hoof goes to make up a diagnosis. The heat or coldness of certain parts of the animal only goes to show that some organs, as the Brain, Stomach, or Bowels are affected. At other times this increase or loss of temperature may be due to local congestion of the lungs, &c. Hence I contend that the term Horn-Ail or Tail-Ail, as expressing the condition of parts emphatically affected, is unworthy of notice. It shows lack of common sense to uphold such a theory. You might as well put salt in a man's big toe for tooth ache, as put salt and pepper in a cow's tail for any affection.

Black Tongue.

This epizootic has raged very extensively, at different times, in some of the Southern States. Several persons have lost their lives by drinking the milk from animals thus affected. The disease affects the deer tribe, and any animal which may feed upon the meat of such diseased animals. The cause of this disease is yet obscure; but it is

supposed to be due to the rust found on the crops and grass of the Southern States.

Symptoms.

The cattle become attacked as in a case of founder, *viz:* Stiffness of limbs, frothing at the mouth, loss of appetite, with swolen tongue and gums, which turn black. Death usually follows.

Treatment.

Prompt and energetic treatment is here required. The disease is congestive and apt to run into the Typhoid state. The animal should be drenched with the following, upon appearance of the first symptoms: Table Salt 12 ounces; Warm Water 1 quart; Tincture of Capsicum 2 ounces. This medicine acts as a powerful antiseptic and stimulating tonic. If on applying the hand to any part of the body, a crackliug sound is elicited it shows an accumulation of gas beneath the skin. The patient should then be given :— Pyroligneous Acid 2 ounces; Pure Oil of Sasafras 28 drops; Linseed Tea 1 quart. Mix the oil with the latter and then add the acid. Then apply the following to the emphysematous region : Soft Soap 4 ounces; Oil Sasafras ½ ounce; Tinct. Capsicum 2 ounces; Tincture Peruvian Bark 1 pt., dissolve the Sasafras in two ounces of Alcohol. Mix and rub with same. The swollen tongue should be frequently covered with fine salt. Tonics should be given the moment improvement appears to have taken place. One ounce of the Fluid extract of Chamomile Flowers may be taken twice daily.

Puerpral Fever.

Puerpral Fever is a disease of an inflammatory type. It usually attacks cattle which have been stall fed and are fat; and attacks them within a fortnight after calving; and may occur within a few hours.

Symptoms.

There is loss of appetite, accelerated pulse and respiration, tongue slightly coated, mouth hot and clammy, muzzle dry. There is wildness about the eyes, with some twitching of the muscles. The cow soon grates her teeth, foams at the mouth, dashes her head on the floor, &c. The udder becomes swollen, and the secretion of milk is partly suspended.

Prevention.

Stop luxuriant feeding for ten days before calving and five days after.

Treatment.

When the disease is present, give, at once, twenty drops of the Tincture of Aconite Root, and ¼ ounce Opium, in powder, in a bottle of thin gruel. Repeat this dose in half an hour. The Aconite must be repeated every four hours without the Opium, until four or five doses have been given. Place chopped ice in a bag on the forehead, and attach it to the horns, renewing it when needed. This being done quickly; at more leisure get Epsom Salts, 1 pound; Table Salt, 1 pound; Ginger, ½ an ounce; mix and dissolve in cold water, with Molasses to sweeten, and give

at one dose. Use clysters until the bowels are moved.

Approach of Calving.

The fact of the cow being certainly with calf must be well known by all persons at all acquainted with this useful animal. The following are infallible signs: Cessation of the monthly menstrual evacuations, and nondesire for the bull; the gradual increase of the size of the belly, when the calf may not only be plainly felt, but, by watching, is often seen to kick against the side; as she approaches the time for calving, the bag begins to enlarge; external organs of generation become large and flabby: and when her full time has passed she shows, by signs of peculiar uneasiness, that the critical period has arrived, which prompts the desire, with some cows, to withdraw to the woods, or some secret place. Some have claimed that when a male it is carried beyond the natural time for the female. But nine months, or about 270 to 280 days, are about the natural interval between conception and calving, although she may, in some cases, run beyond the above named period. And on the other hand she may calve much sooner, where she has been abused; by running her, beating her, or abuse of other description, which we will not enlarge upon in this brief chapter.

This brings us to one of the most important circumstances connected with successful calving, or foaling; both of which we will treat under one special head.

Treatment when Calving, or Foaling.

When assured the cow, or mare, has arrived at her full time for delivery, and the natural pains appear unavailing, an examination should at once be made to ascertain the true part of calf, or colt, presented; which, when natural, and no accident or abuse has occurred, will always be the head. And finding that presentation, in reference to either calf or colt, delivery is not apt to be much protracted, (especially after first offspring), unless in case of plurality births, (2 or more at once), which may take place with presentation of foreleg of one, and hindleg of another. In a double presentation of the foregoing nature, ascertain the true position of both calves or colts, as the case may be, shoving back the one. The practitioner must here, closely criticse and judge which of the two occupies the natural precedence to birth. A close and critical examination will always indicate which must be first brought forth. And, if we cannot obtain the natural presentation, we must, if the forefeet present, secure both in a noosed rope, which put into the hands of an assistant, and introduce the hand and grasp the head and bring it at once into the natural passage, or Vagina, (first raising hind parts of cow) and, having calf placed in foregoing position, a little assistance only, ordinarily, is required, in conjunction with natural labor pains, to effect the delivery. But do not use too much force for fear of inversion of the womb. Another form of mal-position is where the head and neck already having entered the vagina, without the feet, forces upon us the following alternatives: Frst, if possible, to force the head back into the womb; or, failing in this,

to cut off the head, excepting just skin sufficient to assist us, by means of ropes attached to the lower jaw and forefeet, which must likewise be grasped in another rope, or the same if long enough, with just force enough applied to assist natural efforts in expulsion of the calf.

In the third mal position of the calf we may find, either foreleg presenting; nose pressed downwards; the crown of head only being seen or felt. In such case, secure the leg presented, by a cord; and, already having the cow elevated, shove the crown of the head downwards and pass a cord around the lower jaw; find and secure the other foreleg, in same noose with the other; pull the rope attached to jaw and that holding forelegs simultaneously; and as the head and feet are presented let them be guided, by hands of an assistant, until they have fairly entered the proper channel, when but little more than nature will be required to finish the work.

Now, in the fourth place, comes the presentation of breach, or buttocks, which can only be delivered in the following way: The calf, or colt, must be shoved back; and the operator must change the position in such shape as to grasp the hindlegs and secure them by rope, as before, when nature will gradually effect the desired result without physical force.

The fifth, and last, presentation we shall state is where the crown of the head presents; and the calf upon its back. This, at best, being a tedious delivery, do not wait too long upon nature's efforts; but, if the strength of the cow, or mare, is fast failing, without reasonable success towards delivery, secure the forelegs within a noose on one end of a rope of sufficient length

to attach the other end of same to under jaw, turn the calf in most favorable position for delivery, if possible; use nothing beyond reasonable force and delay; but, if the calf is large and the dilitation of natural passage is inadequate, do not delay opening both head and body of calf, or colt; as, in this exigency, the mother's life must always be treated as paramount to the offspring.

Retention of the Placenta, or Afterbirth.

Or, as it is sometimes called, the Cleanings of the cow after calving. Where the cow is in a healthy state, and has gone her full time, the placenta, or afterbirth, will not be retained any length of time after calving; but when the cleanings are retained beyond three to five hours it is to be naturally inferred that the general health of the cow is not right, and that something must be done.

Treatment.

Epsom Salts 1 pound; Powdered Ginger 1 ounce; mix and give in two or three quarts of Hop Tea. If the cow is a good feeder she may take it in a little Middlings slop, or warm water sweetened with molasses. The foregoing mixture not having the desired effect, in three or four hours; the right hand, being well greased, should be introduced and carefully overcome the adhesions, and remove this unseemly appendage which nature usually removes in due time. After removal of placenta; first sponge the womb well with warm water, after which use one or two quarts of solution of Alum and Tannin as an

injection into the womb to facilitate contraction.

I will here mention an accident happening often just after the birth of calves of disproportionate size to the cow, by cross with over-grown bull, (which should always be guarded against) which is often the cause of inversion of the womb where the cow, unassisted, has been obliged to strain every ligament and muscle to expel a calf which shouid have been removed piecemeal by a skillful Veterinarian. But this accident being upon us, from any cause whatever, let it be well cleansed with warm water and sponge, and returned; and a seaton put in just towards the head from root of tail, immediately over spinal column, which will prevent recurrence of same accident. The same treatment for mares in like cases.

GLOSSARY.

A.

Abnormal—A departure from nature, unatural.
Abrasion—An accidental removal of a portion of the skin.
Acclimatize—To naturalize to a new climate.
Accnesia—A loss of the natural muscular power.
Acine—An eruptive disease of the skin.
Acute—A disease just begun, or of very short duration
Adenoid—Disease of the glands.
Adipose—Made up of greasy substance.
Adinamic—Lacking, or destitute of physical power.
Afflux—Rushing towards particular part.
Albumenuries—A substance like white of Eggs in Urine.
Algid—Destitute of natural heat, cold.
Amanusosis—Disease of optic nerve—ending in blindness.
Amenorhoeah—Absence of the monthly flow—(Menstruation).
Amosphus—Without any organized form—shapeless.
Amphoric—Pitcher-like, or decanter-like; Applied to sound heard by auscultation or on percussion.
Amyloid—Resembling starch.
Aneamia—Deficiency of red blood.
Anaecthesia—Absence or loss of sensation and perception.

Analeptic—Invigorating restorative.
Anasarca—General dropsy of the areolar tissue.
Aneurison—Morbid dilation of an artery, with or without rupture of its coats.
Anfractuous—Having an irregular, grooved, or broken surface: applied to a cavity in the lung.
Anquia—A choking or suffocating disease.
Anodyne—Tending to relieve pain.
Anorexia—Loss of appetite.
Anthelmintic—Destructive of, or tending to cause the removal of worms.
Anti-Arthritic—Curative of gout.
Anti-Lithic—Solvent of stone or gravel.
Anti-Philogistic—Tending to arrest, or mitigate inflammation.
Anti-Psoric—Curative of itch.
Anti-Toxic—Antidotal to poison.
Apex—The uppermost point.
Aphonia—Loss of voice.
Aphalthae—Small, whitish ulcers originating in vesicles, frequently found in the mouth.
Aplastic—Inorganizable.
Apnoea—Arrest of respiration.
Applecata—Thugs applied to, or brought into contact with the exterior of the body.
Apyrexia—Intermission.
Aracheritis—Inflammation of the arechnoid membrane.
Arthritis—Gout.
Ascarides—Round worms.
Ascites—Peritoneal dropsy.
Asphyxia—Suspension of breathing, or of the aeration of circulation of the blood
Asthenia—Debility.

Asthenic—Without strength. feeble. attended by prostration.
Ataxic—Irregular. out of order.
Atelectasis Pulmonum—Imperfect expansion of the lungs.
Atheroma—A pulp-like. pap-like. formation or degeneration.
Atony—Loss of tone.
Atrophy—Absence. or defect. of nutrition.

B.

Balancive—Promotive. or restorative of balance. proportion. harmony.
Biology—The science of life. and of the functions of living b-ings.
Blastema—Material out of which tissue may be organized.
Bleb—See Bulla.
Borborygmus—Intestinal gurgling.
Brights Disease—Fatty. or other. degeneration of the kidney.
Bronchophony—Resonance of the voice. in the lungs. like that normally heard in the bronchial region.
Bronchorphea—Excessive discharge of mucus from the bronchial tubes.
Bulinia. Boulimia—Excessive appetite.
Bulla—A blister. *i. e.* an elevation of the cuticle containing serum.

C.

Cachexia—A depraved. or diseased habit of system.
Caderic—Belonging to the dead body.

Calcareous—Containing or resembling chalk or lime.
Calcus—Stone.
Calvuria—The cranium.
Carciuoma—Cancer.
Cardeialgia—Heartburn.
Catalepsy—A nervous affection, characterized by paroxymal rigidity of the muscles.
Catarrh—An affection of the mucus membrane, characterized by increased secretion.
Cavenous—Connected with, or indicative of cavity.
Cerebritis—Inflammation of the brain.
Chalybeate—Containing iron.
Chaloasma—Liver spot, a yellow discoloration of the skin.
Cholagogue—Tending to increase the flow of bile.
Chondroma—A cartilaginous tumor.
Chorea.—St. Vitus dance.
Chronic—Protracted, continuing without much change for a considerable period.
Cinchonism—The production of characteristic effects of Peruvian bark, or of its alkaloids, upon the system.
Circumfusa—Things surrounding the body; e: g: light, air, moisture, etc.
Cirrhosis—Waxy degeneration of the liver.
Claus—A corn.
Clonic—Successive, interrupted, alternating.
Colica Pictomun—Lead colic.
Colliquative—Copius, exhaustive.
Colloid—Jelly-like.
Coma—Completely unconscious, stupor.
Congenital—Existing at the time of birth.
Congestion—Accumulation of blood.
Consonance—Repetition or reduplication of sound, by the sonorous vibration of a body upon which it infringes.

Contactive—Contagious.
Contra-Indicate—To prohibit.
Contra-Stimulant—Sedative.
Corneitis. Inflammation of the cornea.
Coryza. A cold in the head.
Cosmic. Belonging to the universal system, or order of nature.
Coup-De-Solid. Sunstroke.
Coxalgia. Disease of the hip-joint.
Crepitant Crackling. Applied technically to the *fine* crackling heard on ausculitation in pneumonia
Cretify. To convert into a chalky substance.
Cutaneous. Pertaining to the skin.
Cyanosis. Blueness from imperfect circulation of erotion of the blood.
Cynanche Angina.
Cyst. A sac, cell, or bag, formed of membrane and containing more or less fluid.
Cystetis. Inflamation of the urinary bladder.

D.

Decubitus. The manner of lying down.
Decussation. Crossing x-like from side to side.
Depletion. Abstraction of blood or other material from the system.
Dermatophyte. A vegetation upon the skin.
Desideratum. Something desired or required, an important object.
Desquamate. To scale or peel off.
Detritus. Refuse, the result of wearing or breaking down.
Diabetes. Excessive urination.
Diabetes, Melleties. Excessive discharge of urine containing sugar.

Diagnosis. The discrimination of diseases, the determination of the nature of an attack, or of the conditions of the organs in a given case.
Diaphoretic. Production of perspiration.
Diastole. Dilatation.
Diathesis. A constitutional tendency, peculiarity of habit.
Dicrotous. Double beating.
Diptheria. Membranous sore throat.
Diptheintic. Pseudo membranous.
Diuretic. Production of increased flow of urine.
Drastic. Active, powerful.
Dynamic. Relating to *power* or *force.*
Dynamise. To imbue with force or power.
Dyscrasia. A morbid state of the blood or of nutrition.
Dysmenorrhoea. Difficult or painful menstruation.
Dysphagia. Difficulty of swallowing.
Dysuria. Difficult urination.
Dyspnoea. Difficult respiration.

E.

Ecchymosis. Effusion of blood under the skin.
Eclampsia. Convulsion.
Ecthyma. A desease of the skin, characterized by *large postules.*
Ectrotic, Abortive. Production of abortion.
Eczema. A *vescicular* eruptive desease.
Effite. Worn out, dead.
Elephantiasis Arabum. An enlargement of the limbs, scrotum, neck etc.
Eliminate. To remove or drive out from the system.

Embolic. Obstructive, applied to a clot thrown as a plug into an arterial trunk.

Emphysema. Distention of a cellular tissue with air.

Empirical. The result of *observation* only, as contrasted with *rational* or *deductive.*

Emprosthotonos. Arching of the body forward.

Empyema. A collection of pus, in the pleural cavity.

Emulsify. To suspend or diffuse an insoluble substance in water by means of muscilage.

Encephaloid. Brain-like.

Encephalon. The brain, *i. e.* the whole contents of the cranium.

Endemic. Local, confined to certain localities.

Endermic. Within or under the skin.

Endocarditis. Inflamation of the lining membrane of the heart.

Endosmose. The spontaneous intercharge of fluids through organic membrane.

Enterites. Inflamation of the bowels.

Entozoon. A worm, or other parasite, within an animal body.

Enuresis. Incontinence of urine.

Ephelis, Ephelides. Sunburn.

Ephemeral. Continuing for a day.

Epigastric. Over the stomach.

Epilepsy. A desease characterized by recurring convulsions, during which the patient is unconcious.

Epyphite (Epiphyte). A vegetable parasite.

Epistaxis. Bleeding from the nose.

Epithelioma. An ephithetial tumor.

Epithelium. A thin, superficial layer of cells upon a vasement membrane.

Epizootic. Affecting animals over an unlimited region. Not limited to any locality.

Epizoon. A parasitic animal or animalcule.

Equinia. Glandos, a malignant desease of the horse sometimes conveyed to men.

Eremacausis. Decay, or slow combustion.

Erosion, Corrosion. Destruction of tissue by chemical agency.

Eructation. Belching of wind.

Erythema. A florid inflamation of the skin, classed with the *Exanthemata.*

Eteology. The study of the causation of desease.

Exacerbation. An increase of the symptoms, *e. g.* of fever, a ferbrile paroxysm.

Exanthem: A rash or florid eruption.

Exanthemata. A class of deseases in which, with fever there is an eruption characteristic of each.

Exite motor. Reflex, relating to the production of movement in muscles by impressions, transmitted through the nerves and nerve centres.

Exito Secretory. Reflex excitement of secretory organs by distant impressions, transmitted through the nerves.

Excreto. Matters thrown out as waste from the body.

Exfoliate. To fall or throw off, like leaves from a tree.

Exosmosis. See Endosmosis.

Extravasate. To throw blood out from the vessels.

Exudation. The throwing out of lymph from the vessels during the morbid process. Also, the lymph itself which is thrown out.

F.

Flocculent. Resembling locks of wool.
Fornites. Things supposed to retain and convey contagion or infection, as clothing, merchandise, &c.
Fusceds. Yellow staining of the skin in patches or blotches.

G.

Gangrene. Mortification.
Gastralgia. Pain in the stomach,
Gastritis. Inflamation of the stomach.
Castrodynia. Stomach ache.
Gastro, hepatic. Affecting both the stomach and the liver.
Gesta. Things *done*, actions, labors.
Glossitis. Inflamation of the tongue.
Glucohaemia, Glycohaemia. Excess of sugar in the blood.
Glucosuria, Glycosuria. The presence of sugar in the urine.
Goitre Bronchocele. Enlargement of the thyroid gland.

H.

Habitat. The locality in which a plant or other living thing grows or abounds.
Haematemesis. Vomiting of blood.
Haematosis. Blood formation, blood development.
Haemataeria. Voiding of bloody urine.
Hemicrania. Pain in one half of the head.

Hemiplegia. Paralysis of the arm and leg, &c., *of one side.*

Hemorrhoids. Piles.

Hepatitis. Inflamation of the liver.

Hepalization. Conversion into a liver like structure.

Herpes, Tetter. A vescicular eruption.

Heterologous. Different from anything natural to the body.

Homologous. Parallel to or resembling things natural to the body. In *Physiology* the word has a more *extented* meaning.

Hydatid. A vescicular formation generally considered to be an animal parasite, found in various organs, causing their dlstentions into cepts or tumors.

Hydraemia. A watery condition of the blood.

Hydragogue. Causing watery discharges.

Hydraulics. The mechanics of liquids, investigating especially the force and phenomena of liquid pressure and movement.

Hydrocephalus. Dropsy of the head.

Hydro pneumothorax. The presence of water and air together, in the cavity of the pleura.

Hydrodorax. Water in the chest, thoracic dropsy.

Hygiene. The science of health.

Hygrometry. The measurement of the amount of moisture in the air.

Hyperaemaesthesia. Excess of blood in a part, with irritability; commonly called *chronic inflamation.*

Hyperaemia. Excess of blood in a part.
Hyperaesthesia. Over-sensitiveness.
Hyperinosis. Excess of fibrin.
Hypertrophy. Over-growth.
Hypnotic. Promotion of sleep.
Hypochondria. In *Anatomy* the region over the liver and the corresponding region on the left side. In *Medicine* a person affected with depression of spirits from dispeptic deseases.
Hypochondriasis. Dyspepsia with lowness of spirits and imaginary complaints.
Hppogastric. Below the stomach.
Hypostatic. The result of setting or gravitative deposition.

I.

Ichoraemia. Contamination of the blood, pyaemia.
Icterus. Jaundice.
Icthyosis. Fish-skin disease.
Idiopathic. Primary, independent.
Idiosyncrasy. Individual peculiarity of system.
Ilens, Ilic-passion. The most violent form of colic.
Impetigo. A pustutlar eruption.
Incubation. Development, maturation, the period between the introduction of a morbid cause and the appearance of the resulting disease.
Indication. The *pointing* of the signs of disease to the proper mode of treatment.
Induration. Hardening.

Infection. As frequently used synonomous with contagion.
Ingestive. That which is introduced into the body by the alimentary canal.
Innervation. Supply of nervous influence.
Insomnia. Sleeplessness.
Intermunical. Communicating, transferring mutual impressions or excitations.
Interscapular. Between the scapulae.
Intussusceptia. The reception of one portion of intestine into another.
Iritis. Inflamation of the iris.
Ischuria. Difficult urination.

K.

Kakotrophy. Perverted nutrition.

L.

Lancinitating. Lancing, piercing, darting.
Laryngitis. Inflammation of the larynx.
Latent. Concealed.
Lebra. A scaly cutaneous disease.
Lesion. Injury, essential change.
Lencocythaemia. Excess of colorless or white corpuscles in the blood.
Lichen. A popular disease of the skin.
Lientery. Passage or undigested food through the bowels.
Lipoma. A fatty tumor.
Lithiasis. The formation of stone, or gravel.
Lochia. The sero-sanguineous discharge following delivery.
Lumbago. Rheumatism of the lumbar region.
Lumbricus. A long, round worm.
Lupus. A malignant affection of the skin, either tuberculous or ulcerative.

Lymph. The fluid portion of the blood, without the corpuscles, the fluid of the lymphatic vessels; also, the fluid exuded during inflammation.

M.

Macula. A spot or stain.
Malaria. Bad or poisonous air
Mania. Derangement, either intellectual or emotional, or both.
Marasmus. Wasting away.
Matrix. A formative or receptive structure or cavity.
Melanosis. Morbid deposit of, or conversion of, tissue into black pigment.
Meningetis. Inflammation of the membranes of the brain.
Menorrhagia. Excessive flow of the menses.
Metamorphosis. Transformation.
Metastasis. The transfer of a disease or symp- from one part to another.
Metorism. Distention of the alimentary canal with gas.
Miasm. Marsh poison, the local cause of endemic country fevers.
Microphyte. A microscopic vegetation.
Microzoon. A microscopic animalculae.
Miliary. Resembling millet seed.
Modus Operandi. The manner of action or operation.
Molecule. The minutest particle into wich matcan be divided.
Molluscum. An uncommon tubercular disease of the skin.
Multiform. Having many shapes.

Myalgia. Pain, or soreness, tenderness, in one or more muscles.
Myelitis. Inflammation of the spinal cord.
Myeloid. Resembling the spinal marrow.
Myocarditis. Inflamation of the muscular tissue of the heart.
Myopia. Near-sightedness.

N.

Nebulous. Cloudy.
Nephralgia. Pain in the kidneys.
Nephritis. Inflammation of the kidney.
Nervine. Affecting the nervous system.
Neuralgia. Pain, the seat of which is principally in the nerves.
Neuroma. A morbid enlargement of a nerve.
Neurosis. A nervous affection.
Nisus. Effort, attempt, active process.
Normal. Natural, regular, healthy.
Nosography. The description of diseases.
Nosology. The classification of dieases.
Nosophyte. A vegitation connected with, or causative of disease.
Nucleolus. A central granule, or spot, within a nucleus.
Nucleus. The central body within a cell, being itself frequently hollow.

O.

Ochlesis. Crowd poison.
Octohedral. Eight sided.
Odontalgia. Toothache.
Gedema. Swelling from watery effusion in the cellular tissue.
Opthalmia. Inflammation of the eye.
Opisthonos. Arching of the body backwards.

Optinism. Tendency to the best possible result.
Organography. Deliniation of the organs in their position.
Osteosarcoma. Cancerous tumor of bone.
Otalgia. Earache.
Ottis. Inflammation of the ear.
Otorrhoea. Discharge from the ear.
Oxaluria. Presence of oxalic acid (as oxalate of lime) in the urine.
Ozone. Oxygen in the nascent state, or with its chemical activity otherwise intensified, (dynamized).

P.

Palpation. Examination of the chest, etc. by the touch.
Papula. A pimple.
Paracentesis. Tapping.
Paralysis. Loss of power or sensibility; palsey.
Paraplegia. Paralysis of the lower half of the body.
Parenchyma. A glandular or other organic structure, formed chiefly of aggregated cells.
Parotetis. Inflammation of the parotid gland.
Pathognomonic. Positively distinctive or characteristic of a certain disease.
Pathology. The study of the seat, nature, and essential character and laws of disease.
Pellicular. Membranus.
Pemphigius. A bullar eruption upon the skin.
Percepta. Things perceived, impressions upon the sense and brain.
Pericarditis. Inflammation of the pericardium.

Peripheral. Connected with the surface or exterior.
Peritonitis. Inflammation of the peritoneuni.
Perturbation. Disturbance by an exterior or extrinsic cause.
Petechiae. Small purple spots in or under the skin.
Phlebitis. Inflammation of a vein.
Phlegmasia. An inflammatory disease.
Phlogosis. Inflammation.
Photophobia. Dread of light.
Photopsia. Flashing of light before the eyes.
Phthisis. Phrenitis ieflamation of the kidneys.
Pulmonalis. Wasting, Phthisis pulmonalis, pulmonary consumption.
Pica. Departed appetite.
Petyriasis. A disease of the skin, accompanied by the exfoliation of minute scales.
Plasma. Organizable fluid; liquor sanguinis.
Plethora. Redundance of red blood.
Pleuritis. Pleurisy; inflammation of the pleura.
Pleurodymia. Neuralgic pain in the region of the pleura.
Pleuro Pneumonia. Inflammation involving both the lung and pleura.
Pleximeter. An instrument for *mediate* percussion; a stroke measurer.
Pneumonia. Inflammation of the lung.
Pneumothroax. Accumulation of air in the cav- of the pelura.
Polydipsia. Excessive thirst.
Polysarcia. Obsity, fatness.
Pompholyx. A varlety of pemphiugs.
Porrigo. A parasitic disease of the skin.
Post-Organic. Following organization; effete; having been organized, but no longer capable of vitalization.

Praecordial. Over or surronuding the heart.
Premonitory. Warning, threatening.
Prodromate. Forerunning signs or symptoms.
Prognosis. Foreknowledge.
Prophylactic. Preventative.
Prurigo. An affection of the skin characterized by great itching, with little or no rash.
Pruritus. Itching.
Pseudo-Membrane. False membrane, *i. e.* morbid or misplaced coagulation or organization of Lymph.
Psora. Itch.
Psoriasis. A scaly disease of the skin.
Ptyalysium. Salivation, sore mouth.
Purpura. A hemmorrhagic affection of the skin.
Pyamnia. The presence or formation of pus in the blood.
Pyelitis. Inflammation of the pelvis of the kidney.
Pyrexia. Fever.

Q.

Quininzie. To place under the influence of Quinine.

R.

Rabies Canina, Hydrophobia.
Rale. A rattling sound.
Ramule. A small branch.
Rationale. Explanation of a process or occurrence.
Recuperative. Restorative, invigorating.
Reflex, Reflected. Occuring under the influence of a *transmitted* excitation, as contrasted with a *direct* stimulus.
Regurgitant. Flowing or escaping backward.

Renal. Belonging to or effectidg the kidney.

Remittent. Having remissions *i. e.* periods of *dimunition* of the symptoms (*e. g.* of fever) without their total *subsidence.*

Resorption. Reabsorption.

Retinitis. Inflammation of the retina. Resume, resuming, recapitulation.

Revulsion. Driving to another part, driving back.

Rhuchus. A rattling or roaring, or other abnormal sound, connected with respiration.

Rubeola, Morbilli. Measles.

Rupia. A bullar and scabbing disease of the skin.

S.

Saccharine. Of the nature of sugar.

Salivation. Excessive flow of saliva, usually with soreness of the gums, coppery taste, &c.

Sanitary. Pertaining to the preservation of health.

Sarcina. A microscopic vegetation, growing in a square or woolsack-like form.

Sarcoma. A fleshy tumor.

Scabies. Itch.

Schirrus. Hand cancer.

Sciatica. Neuralgia of the sciatic nerve.

Sclerotitis. Inflammation of the sclerotic coat of the eye.

Scorbutus. Scurvy.

Semeiology. The study of the signs and symptoms of disease.

Sensor-motor. Relating to movements which are connected with sensations.

Sensonum. An aggregate term, including those portions of the brain which are the centres of sensation and perceplion.

Sentient. Endowed with sensation.

Septic. Putrefaction or decaying.

Serum. The fluid portion of blood after coagulation, or after the removel of its fibrin ; also, the liquid transuding upon serious membranes ; the liquid of certain dropsical effusions, &c.

Sibilant. Hissing.
Soporific. Promotive of sleep.
Spauaemia Hydraemia. Poverty of blood.
Spermatozoa. Microscopic bodies found in the generative fluid of the male.
Sphacelus. Sloughing.
Spirometry. The measurement of breathing power by the quantity of air exhaled after a forced inspiration
Sporadic. Separate, independant occassional, not endemic, or epidemic or contagious.
Squania. A scale.
Stasis, Staguation. Arrest of movement.
Steatomalous. Fatty, consisting principally of fat.
Stercoraceous. Faecal.
Stertorous. Loud and snoring.
Stethometer. A chest measurer.
Stethoscope. A tube used for mediate auscultation.
Sthenic. Posessed of or attented by vigor and activity.
Stomatitis. Inflammation of the mouth.
Strangury. Dysuria, ischuria.
Subscrepitant. Crackling, but not typically identical with the crepitant rale ; being a coarser sound.
Subjective Originating in the mind, brain, or other part of the individual ; as contrasted with *objective*, *i. e.* of external origin.
Subsultus Tendinum. Jerking of the teudous *e. g.* of the wrist in low fever.
Succussion. Sudden shaking.
Sudamina. Minute transparent vesicles, often seen over the breast or abdomen in low fever.
Sudorific. Promotive of perspiration.
Suggillation Collection of blood in spots under the skin of the dead body.
Suppuration. The formation of pus.
Sycosis. Mentagra.
Syncope. Fainting ; suspended animation.
Synovia. The lubricating fluid of the joints.
Synurgic. Co-operative, working together.

Septole. The act of contraction of the heart and arteries, usually applied to the contractions of the ven tricles.

T.

Tabes. Wasting; atrophy.
Taenia. Tape worm.
Tegument. A covering; skin.
Tenesmus Straining, bearing down.
Tentative. Experimental.
Tetanus. A disease characterized by muscular rigidity.
Therapeutic. Sanative; medical; restorative; promotive of the cure of the disease.
Tinea. Ponigo, a disease of the skin, *Tinea capitos*, contagious ringworm
Tonic. In Physiology and Pathology, as applied to the muscles, tonic contraction means fixed rigidity. In *materia medica* and therapentics, a tonic is a stengthening medicine or agency.
Tormina. Griping pains.
Torula. A minute vegetation, found (*Torula cerevisiae*) in fermentig liquids.
Toxaemia. Blood poisoning.
Toxic. Poisonous.
Tracheitis. Inflammation of the trachae.
Transuldation. Passage of fluid through the walls of vessels.
Traumatic. Resulting from a wound or injury.
Trichoma. Plica polonica.
Trismus Lock-jaw.
Tuberculization. The deposition of tubercle.
Tuberculosis. The development of the tubercular diathesis.
Tumefaction. Swelling.
Turgescense. Distension with fluid, usually with blood.
Tussive. Connected with cough.
Tympanites. Distention of the abdomen with air.
Typical. Representative, characteristic.
Typhoid. Resembling, and yet not identical with typhus.

Typhus. A form of low continued fever.

U.

Uraemia. The presence in the blood of the constituents of urine from inaction of the kidneys.

Urina cibi vel Chpli. Urine of food or chyle, *i. e.* that passed after a full meal.

Urina Saguinis. Urine of the blood, *i. e.* that past in the morning after sleep.

Urinometer. An instrument used to estimate the specific gravity of urine ; by the distance to which it sinks in the latter, as compared with that to which it will sink in water.

V.

Vaccinia. Cow-pox ; vaccination.

Varicose. Dilated, enlarged, vains.

Variola. Small-pox.

Varioloid. Wild or modified small-pox.

Vascular. Well suplied with blood vessels.

Venesection. Blood-letting from a vein.

Venuca. A wart.

Vesical. Pertaining to the bladder.

Vesication. The production of a blister.

Vesicle. A small blister.

Vesicular. Composed of, or resembling, vesicles or small cells.

Vibices. Large spots of effused blood under the skin.

Vibrio. A minute animalcule, rarely found in animal tissues or cavities.

Vecarious. Substitutive.

Vitiligo. Partial discoloration of the skin.

Volvulus. Intussusception, one part of intestive shoving into another.

DISPENSATORY.

—:o:—

DRUGS AND DOSES.

When not otherwise stated, the Doses for the Horse may be given to the Ox.

	Horse.	Ox.
Acetic Acid, antidote to Acids, cooling astringent	1 Drachm	2 drachms
Tincture of Aconite, sedative, diaphoretic	20 30dr'ps	30 40dr'ps
Alcohol, stimulant, diuretic, narcotic	1 to 3 oz.	3 to 6 ozs
Brandy, Whisky, and Gin, stimulant, diuretic narcotic	3 to 6 oz.	6 to 12 oz
Strong Ale, " " " "	½ pint	2 to 4 pts
Barbadoes Aloes, Purgative	6 dr to 1oz	6dr to 1 oz
Cape Aloes, "	1 to 2 oz	1 to 2 ozs
Alum, astringent	2 to 3 ozs	3 to 4 drc
Ammonia Liquid, diffusable stimulant, antispasmodic, anti-acid, diuretic	½ ounce	½ to 1 oz
Aromatic Ammonia, " " "	1 to 2 ozs	2 to 4 ozs
Carbonate of Ammonia, " "	2 to 4 drc	4 to 6 drc
Muriate of Ammonia, stimulant, alterative diuretic	2 to 4 drc	4 to 6 drc
Acetate of Ammonia, Solution, diaphoretic, diuretic stimulant	2 to 3 ozs	3 to 4 ozs
Anise Seed, stomachic carminative	1 ounce	1 to 2 ozs.
Antimony, Tartarized, (Tartar Emetic), sedative, diaphoretic	2 drachms	2 to 4 drc
Areca Nut, Vermifuge, Tamifuge	1 ounce	1 ounce
Arnica Tincture, stimulant, diuretic	1 drachm	1 drachm
Arsenic, alterative nerve tonic	5 grains	5 to 8 grs.
Asafoetida, diffusable stimulant, carminative vermifuge	2 drachms	4 drachms
Azedarach, vermifuge	½ to 1 oz	1 ounce
Belladonna, anodyne, anti-spasmodic, narcotic	2 ounces	2 ounces
Belladonna Extract, anodyne, etc	2 drachms	2 to 3 drc
Artopia (Alkaloid of Belladonna), anodyne,	1 to 2 grs	1 to 2 grs
Balsam of Peru, stimulant, antispasmodic expectorant	1 ounce	1 to 1½ ozs
Benzoin, " " "	1 ounce	1 to 1½ ozs
Borax, nerve sedative, uterine stimulant	2 to 6 drc	½ to 1 oz

Bismuth Subnitrate, soothes irritation of the stomach and bowels	2 drachms	2 to 4 drc
Blackberry Root, astringent	2 to 4 drc	½ ounce
Blue Stone, (copper sulphate)		
Boneset, stimulant, tonic, diaphoretic	½ to 1 oz	1 ounce
Bromide of Potassium, nerve sedative	2 to 4 drc	4 drachms
Buchu, stimulant diuretic	4 drachms	½ to 1 oz.
Calomel, purgative	1 drachm	1 to 2 drc
Camphor, calmative, anti-spasmodic	1 to 2 drc	2 to 4 drc
Cantharides, stimulant, diuretic	5 grains	5 to 10 gr.
Capsicum, Cayenne Pepper, stimulant, aromatic	2 to 3 drc	2 to 4 drc
Caraway Seed, stomachic	1 ounce	1 to 2 ozs.
Cardimons, "	1 ounce	1 to 2 oz.
Cascarilla, stimulant, bitter tonic	½ to 1 oz.	1 ounce
Carbolic Acid, sedative, anodyne, astringent, anti-septic disinfectant	½ to 1 drc	1 drachm
Castor Oil, purgative	1 pint	1 to 1½ pt.
Catechu, astringent	2 to 5 drc.	3 to 8 drc
Chamomile, stimulant tonic	1 ounce	1 to 2 oz.
Cherry Bark, Wild, expectorant	½ ounce	½ ounce
Chloral Hydrate, sedative anti-spasmodic	½ ounce	½ ounce
Chloroform, stimulant	1 to 2 drc.	
Cinchona, Peruvian Bark, bitter tonic, anti-septic, anti-periodic	1 to 3 ozs.	1 to 3 oz
Cinnamon, stomachic	4 to 6 drc.	½ to 1 oz
Codliver Oil, tonic	4 to 6 ozs.	6 to 8 ozs.
Colchicum, diuretic, sedative	½ to 1 drc.	1 to 2 drc
Columbo, bitter tonic	4 to 6 drc.	½ to 1 oz
Conium Extract, sedative	1 drachm	1 to 2 drc
Copavia, stimulant diuretitic expectorant	2 to 4 drc	3 to 4 drc
Copper Ammoniated, tonic, anti-spasmodic, astringent	1 to 2 drc	1 to 2 drc
Copper, Iodide, tonic discutient	1 to 2 drc	
Copper, Sulphate; tonic, astringent	½ to 1 drc	1 to 2 drc
Croton Seeds, purgative	10 to 12oz	15 to 20oz
Croton Oil, "	15to 20 dp	20to30 dps
Cream of Tartar, diuretic	1 ounce	1 ounce
Dandelion Extract, Taraxacum, diuretic, laxative, bitter	1 to 1½ oz.	2 ounces
Digitilis, sedative, diuretc	15to20 grs	½ to 1 drc
Dovers Powders, sedative, diaphoretic	3 drachms	3 to 4 drc
Ergot, checks bleeding, parturient	½ to 1 oz	1 ounce
Ether, diffusible, stimulant	1 to 2 ozs.	2 to 3 ozs.
Fennel Seed, stomachic	1 ounce	1 to 2 oz
Felix Mas Extract, Male Shield Fern, vermi-		

fuge, tacuiacide	1 ounce	
Galls Oak, astringent	4 to 6 drc	1 to 2 ozs.
Gallic and Tannic Acid, Tannum, astringent	1 to 3 scr	
Gentian, bitter tonic	4 drachms	½ to 1 oz
Ginger, stimulant stomachic	1 ounce	2 ounces
Glauber Salts, Soda Sulphate		
Henbane, Hyoscyacumus Extract, sedative, antispasmodic, narcotic	2 drachms	2 to 4 drc
Hemp, Indian Extract, antispasmodic, suporific, narcotic	½ to 1 drc	
Hydrocyanic Acid, (Prussic)		
Iodine, alternative, discutient	10to20 grs	20 to30 gr
Iodide of Potassium alterative, diuretic	½ to 1 drc	1 to 2 drc
Iron Peroxide, tonic	2 to 4 drc	4 drachms
Iron Carbonate "	2 to 4 drc	
Iron Sulphate tonic	2 to 4 drc	
Iron Iodide, tonic discutient	½ to 2 drc	1 to 2 drc
Iron, Tincture of Muriate, astringent, check bleeding	½ to 1 oz.	1 to 2 ozs.
Kuio, astringent	½ ounce	½ to 1 ozs.
Laudanum, (Opium)		
Lead, Acetate, (Sugar of Lead) astringent, sedative.	1 to 2 scr.	2 to 3 scr.
Lime Water, anti-acid, astringent	4 to 5 oz.	4 to 8 ozs.
Lime, Carbonate, Chalk, anti-acid, astringent	1 to 2 oz.	2 to 4 ozs.
Lime, Chloride, Chlorinated, checkes tympany, disinfectant	2 to 4 drc	
Linseed Oil, laxative	1 to 2 pts	1 to 2 qts.
Lobelia, sedative, anti-spasmodic, expectorant	1 to 2 drc	1 to 3 drc.
Magnesia, anti-acid, antidote to arsenic	1 to 2 ozs.	2 to 4 ozs.
Magnesia Sulphate, Epsom Salts, laxative		1 to 2 lbs
Mallow, demulcent, freely		
Mentha Piperita (Peppermint)		
Mercury, sub-chloride calomel		
Muriatic Acid, Hydraulic Acid, tonic astringent, caustic disinfectant	1 drachm	2 drachms
Myrrh, stimulant tonic	2 to 4 drc	4 to 6 drc.
Nitre Potassa, nitrate		
Nitric Acid, tonic, astringent, caustic	1 drachm	2 drachms
Nux Vomica, nerve stimulant, tonic	10 to 30 gr	20to40 grs
Oak Bark, astringent	1 ounce	2 to 4 ozs.
Olive Oil, laxative	1 to 2 pts	2 to 3 pt.
Opium, narcotic, sedative, anodyne, antispasmodic	½ to 2 drc	2 to 4 drc.
Opium Tincture, Laudanum " "	1 to 2 ozs	2 ounces.
Morphia Muriate, narcotic, " "	3 to 5 grs.	5 to 10 gr.

Peppermint Oil, stomachic, anti-spasmodic...	20 drops	26to30 dps
Peruvian Bark, (Cinchona,).....		
Pepper; Black, White, stomachic, stimulant...	2 drachms	3 drachms
Pimento, stomachic, stimulant	2 drachms	3 drachms
Podophyllin, purgative, sedative.....	1 to 2 drc	2 drachms
Pomegrante, Root, Bark, vermifuge.....	1 ounce	1 to 2 ozs.
Potassa, Acetate, anti-acid, diuretic, diaphoretic.....	6 to 8 drc	1 ounce
Potassa, Nitrate, diuretic, febrifuge	6 to 8 drc	1 ounce
Potassia, Bicarbonate, anti-acid, diuretic.....	6 to 8 drc	1 ounce
Potassa, Chlorate, stimulant, diuretic, refrigerant, anti-septic	1 to 4 drc	
Potassium, Iodide, (Iodine).....		
Potassium, Bromide, nerve sedative.....	½ ounce	
Potassium, Cyanide, sedative, anti-spasmodic	1 to 2 grs.	2 grains
Prunus Virginiaca, (Wild Cherry).....		
Prussic Acid, sedative, anti-spasmodic	20to30 dps	30to40 dps
Quinia Sulphate. bitter tonic	20 grains	20to30 grs
Rhubarb, laxative tonic.....	1 ounce	2 ounces
Resin, diuretic.....	4 to 6 drc	½ to 1 oz
Soap, diuretic, anti-acid, laxative.....	1 to 2 ozs.	
Soda Bicarbonate, anti-acid, diuretic.....	4 to 6 drc	4 to 8 drc.
Soda, Sulphite, Bisulphite, Hyposulphite, anti-septic, disinfectant, alterative, relieves tympany	1 ounce	2 to 3 ozs.
Soda Sulphate (Glauber Salts) purgative.....	1 to 1½lbs.	1 to 2 lbs.
Sodium Chloride (Common Salt), tonic,verm ifuge, purgative.....	1 to 2 ozs.	2 to 4 ozs.
Santonin Wormseed, semen contra, vermifuge	½ to 1 oz.	
Squill, diuretic, expectorant.....	½ drachm	½ to 1 drc
Silver Nitrate (Lunar Caustic), nerve tonic...	5 grains	5 to 8 grs.
Spanish Flies (Cantharides)		
Spigelia, vermifuge.....	½ to 1 oz	1 to 2 ozs.
Strychnia, nerve tonic.....	1 to 2 grs	1 to 3 grs.
Sulphur, expectorant, diaphoretic.....	3 to 4 ozs.	5 to 6 ozs.
Sulphur, laxative, alternative.....	1 ounce	1 to 2 ozs.
Sweet Spirits of Nitre, Spirits of Nitrous Ether, stimulant,anti spasmodic,diuretic diaphoretic	1 to 2 ozs.	3 to 4 ozs.
Stramonium, narcotic, sedative.....	20to30 grs	½ to 1 drc
Sulphuric Acid, tonic, refrigerant, caustic...	1 drachm	2 to 4 drc
Tobacco, sedative, anti-spasmodic, vermifuge	4 drachms	4 to 6 drc
Tar, expectoran, anti-septic.....	½ to 1 oz.	½ to 2 ozs.
Turpentine Oil, stimulant, anti-spasmodic, diuretic	1 to 2 ozs.	1 to 1½ oz.

Valerian, diffusable stimulant, anti. spasmodic vermifuge	2 ounces	2 to 4 ozs.
Veratrum, Sedative	1 scruple	½ to 1 drc
Wild Cherry Bark, expectorant	1 ounce	1½ ounce
Zinc Carbonate, astringent tonic	2 drachms	2 to 4 drc
Zinc Sulphate, " "	1 to 2 drc	2 to 3 drc

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APPENDIX.

EPIZOOTIC.

A specific epizootic fever of a low form connected with inflammation of the respiratory, or mucous membranes of the throat and lungs, and it has prevailed from time to time in different parts of the world choosing its victims from almost every species of domestic animals from the swift courser to the slow draft or cart-horse, on and onward until from the most noble and useful it attacks the domestic pets. But the horse (through man's abuse) being the common prey to this terrible disease he must naturally command our principal attention.

CAUSES: Almost innumerable are the causes ascribed to this terrible malady, among the principal of which are the following, as generally set down, viz. peculiar conditions of soil and climate, volcanic action, atmospheric electricity, aerial moisture or dryness, density or levity season, temperature, winds, calms, ozone and antozone have been set down as its causes and comparable with the thousend causes ascribed to all the various maladies are but speculative at best and really of but insignificant importance in comparison with the remedies that are calculated to cure this terrible disease. The terrible epizootic of this country in 1872 was preceded and accompanied in Michigan by an excess of ozone, but the same excess did not by any means control its

circulation in other states, which were traversed by gradual progression, and with a rapidity proportionate to the celerity of communication. Again insular, and sequestered localities escaped, viz Prince Edward's and Vancouver's islands, Key West, Hayti, St. Domingo, Jamaica and Lapaz. The island of Cuba became victimized through the importation of American horses, but stopped at Panama, where there is no horse traffic on account of the state of the country.

SYMPTOMS: This affection comes on suddenly with great weakness and stupor. The head often inclines downwards with closed, or halfclosed lusterless eyes, and apparent dread of motion, with swaying unsteady gait whenever he attempts to moove, with cracking of the joints. The appetite is lost, mouth hot and clammy, bowels costive, urine scanty and high colored, pulse accelerated and weak (sometimes hard), more or less cough, which is deep painful and hacking, cropitation, or harsh blowing sounds are discovered in the Chest, and membrane of nose is of a bright pink or dull leaden hue, and the ears and legs alternately cold or hot, hair rough, skin tender, and frequently trembling; The nose is found discharging a yellowish white, or greenish matter, which ushers in the critical stage of this disease, when by strictest care the horse may change for the better, and speedily recover, or an increasingly heavy breathing, deep and painful cough, with difficult respiration, and dullness on percussion convince even the ordinary practitioner that the lungs are seriously involved; and at this critical stage may present the symptoms common to Pleurisy, Pneumonia, Bronchitis, Hydrothorax, Pericarditis, Hydropericardium &c. Clots may sometimes form in ventricles or auricles of the heart bringing

the case to a speedy and fatal termination. Another distinct phase of this disease convinces us that (if not the true seat of the affection) we have a serious if not a fatal complication of the Abdominal vicera to combat, which are ushered in by torpor, stupor, tention and tenderness of the Abdominal walls—evinced by colicky pains, ardent thirst, coated tongue, yellowness of membranes of nose and eyes, yellow or reddish urine, costive bowels, and dung in pellet like form and thickly coated with mucus. Rheumatic swelling and tenderness may take place of muscles and joints, lasting for months ; in others, paralysis or delirium ensue or, finally, severe inflammation of the eyes take place.

TREATMENT : Overcome attendant costiveness by giving one third to one half pint linseed oil and bountiful injections of warm water repeating both sufficiently often to keep the bowels open but not to the extent of weakening catharsis. Give febrifuge diuretics, such as liquor, acetate Ammonia, Spirit nitrous Ether, with anodynes (extract Belladonna) and when fever subsides and great prostration comes on, stimulants, such as Nitrous Ether, aromatic spirits Ammonia, Carbonate, Ammonia, and tonics such as fluid extract Gentian or Quassia may be given. But in case of great difficult of respiration, Pleuritic, Pneumonic, or any of the more common symptoms of this character too prompt use cannot be made of the following remedies, viz : Aqua Ammonia, Fortis and Olive oil equal parts, and mustard paste with which rub throat, chest, and abdomen frequently as the case may require, to subdue accompanying inflammation, and should all the foregoing remedies fail, do not neglect blistering or even bleeding, before the strength is

too far exhausted. Keep horse in warm well ventilated stable free from one sided draught and feed soft mashes, carrots, pumpkins, potatoes or anything of a laxative and nourishing tendency, observing most strictly to keep the horse warmly covered, and in no case driven into a worry sweat. The practitioner must always keep in mind the very liable complications of at least a sympathetic (if not original) affection of stomach and bowels, and recollect that it is very safe (when not always requisite) to add the following demulcents in every case viz : slippery elm, marsh mallows or flax seed, accompanied with Anodynes, Laudanum, Aconite Balladonna &c,, in doses according, size, age, and condition of horse and aggravation of symptoms. Should much excitement of brain ensue wet cloths, ice, mustard or blisters according to severity of symptoms, accompanied purgatives, anodynes or whatever the ease may indicate, and if any rheumatic complication should appear, use Tr. Colchicum Propylamine, Acetate Potassa, turpentine, warmth, and all the most advisable means recommended in that afflicting disease.

HOG CHOLERA,

or intestinal fever of swine, is a specific, contagious disease common to hogs attended by congestion, exudation, extravasation of blood and ulceration of the membrane of the stomach and bowels, by liquid fetid diarrhea, by general heat and redness of the surface, and by the appearance on the skin, and mucous membranes of spots and patches of a scarlet, purple or black color,

and proves fatal in from one to six days, or terminates in a tedious uncertain recovery.

SYMPTOMS: It breaks out after exposure in from three days to a week in warm weather, and from 8 to 15 days in cold weather, and is attended with shivering dullness, prostration, burying themselves in the litter, indisposition to motion, hot, dry snout, sunken eyes, wabbling gait, poor appetite, urgent thirst, heat of body 103 to 105 dgr. Fh., and the pulse about 103 to 105. Accompanied with heat, redness and tenderness of the skin are found red and black spots, the former disappearing on pressure, while the latter remain, the tongue is heavily coated, pulse small, weak and rapid, breathing quick, and often attended with a hard dry cough, nausea and vomiting, are often accompanying symptoms; great ado on pressure of the belly, bowels sometimes costive throughout, but more generally an exhaustive relax comes on about the third day with very fetid and offensive discharges, Lymph and blood often pass off with discharges of the bowels, and before death the poor animal looses control of hind limbs, often sinking into complete stupor, attended with muscular trembling, twitching and involuntary passages of the bowels.

CAUSES: Is generally brought on by contagion but faults in diet may be concerned in its developement. The contagion is said to be borne half a mile in the wind and is with difficulty eradicated from pens, &c.

TREATMENT: Should not permissible (or mixed) unless in a free and disinfected atmosphere. Feed well boiled, barley gruel, or gruel of rye, likewise thoroughly boiled; but should the foregoing excite or augment the fever, feed

corn starch, made with new milk, let the drink be fresh cool water a little soured with Sulphuric acid ; and if bound in the bowels give Castor oil or Rhubarb (as called in prescriptive vocabulary) and injections of warm water followed by fever medicines (Nitrate of Potash and Bi-sulphite of Soda) If uour hog survives the shock of the first few days and presents signs of ulceration of the bowels (known by bloody dung and tender belly) give oil of Turpentine, 15 to 25 drops night and morning, and follow with tonics and plenty of soft feed as before decribed.

PREVENTION : As soon as you see any symptoms of this (or any distemper like affection) you can not divide to soon the sound and unsound, thoroughly desinfecting pen and everything with which the diseased may have come in contact, and do not let any that have died remain without burial, at once kill and bury all hopeless victims. Apply thermometer within the sectum and if heat is above 103 dgr. Fh. destroy, or remove all such to a free and healthy place beyond any possibility of conveying contagion to others, or kill and bury at once as before directed. Feed animal or vegetable charcoal, Bi-sulphite of Soda, Carbolic acid, or Sulphate of Iron to the healthy, avoiding all suspected food, places, or even water that has been frequented by deceased hogs. Observe the extensive and rigid use of disinfectants, and by no means forget to keep the sound free from the contaminated.

INFLAMATION OF THE EYE-OPHTHALMIA.

Either recent or continuous inflammation of the eye arises from the same general causes, by blows, hay seed, chaff, dust, lime, thorns, or any external

violence done to the eye as well as any foreign substance that may come in contact with that delicate organ as well as the influence of cold currents which may not only inflame the immediate coats of the eye and lachrymal duct but derange the whole normal condition of that delicate organ. This organ may likewise be affected by a worm called *Filaria Lachrimalis*, lodged inside the eyelids and in pigs of the measle bladder worm which is called *Cysticerus Cellulosu*, lodged in the fat around the eye. The general symptoms of this disease are a more or less inflamed appearance of the lids and coats of the eye, invariably discharging a watery fluid, and in the beginning always attended with heat in proportion to severity of inflammatory stage. In a short time after first attack (if not at once cured) a bluish white film appears over the sight but does not penetrate deeper than transparent part of the eye-ball. The swelling of the eyelids may sometimes be so great as to fill up the hollow above the eye. There is apparently an entire absence of sensibility on exposure to light as in a sound state of the eye which establishes the mechanical fact that the film covering the eye shields the optic nerve from the irritating influence of light or that the shock of disease has temporarily paralized the sensibility of the optic nerve.

TREATMENT: The practitioner must first submit affected eye to a careful but thorough examination that he may know wether any foreign irritative substance is producing the disease present, and in case hay-seed, chaff, dust, sand or any floating object is found it may be removed with a handkerchief and a thin, flat curved stick if the surgeon is in possession of no better instrument. Should the offending object be thorn,

splinter or any object imbeded in the coats of the eye the surgeon of course will choose or invent such an instrument as may be best adapted to the nature of the case before him. On the other hand should the inflammation present be the result of external violence and no irritative lodgement in the eye, the remedies must be of a cooling, palliative, or constitutional nature. Let the horse be kept in a dry comfortable stable, free from passing currents and not subject to too bright a light, and his eye, or eyes, kept well and often wet with preparation of sugar of lead, 1 drachm, or sulphate of zinc, with addition of 10 grains morphia to 1 pint water, and keep the bowels well open with Glauber's salt or Aloes, giving frequent injections of warm water and castile soap, If the stable should be sufficiently light to affect returning sensibility of optic nerve, it must be darkened or eye shielded by adequate shade of dark green silk prepared in form of a pad. Perseverance in the above treatment with strict quietude and light diet, such as bran mash, carrots, pumpkins and potatoes is usually all sufficient to obviate all ordinary cases of inflammation of the eyes to which I will add as a natural beneficial remedy if available in warm weather, turn out during the night to grass by himself so that he may not be overheated through the chaseing of horses which is often the case when in company.

PERIODIC OPHTHALMIA, OR MOON BLINDNESS.

In passing over the gulf between simple inflammation (or ophthalmia) to periodic ophthalmia, or moon-blindness, we pass by various accidents (as we will style them) rather than diseases, denominated under the following heads,

viz: "White Speks and Cloudiness of the Eye," "Ulcers of the Transparent Comea," "Tumors of Transparent Comea," and "Retuntis", and come down at once to description of the subject before us, namely, moon-blindness, or periodic ophthalmia. Causes—This disease of such fatal foreboding to the intelligent and experienced veternarian is ascribed to hereditary predisposition ; breeding in dark, damp, cloudy or marshy localities ; keeping in close, dark, and badly arranged stables ; forceing beyond any reasonable speed ; pulling beyond their reasonable load, or anything that is calculated to overtax the true nerve strength.

SYMPTOMS : In many cases there is great tension and solidity of the eye-ball, with an apparent disposition to sink deeper in its socket. The difference between this and simple inflammation is that (unless cured) it comes on once in one to three months observing about the same interval until the poor sufferer is finally left to grope his way through life in total darkness. In the lucid intervals the transparent part of the eye (or sight) retains a heavy bluish appearance around its margin; the iris loses its natural lustre and the anterior chamber begins to present more or less deposit at its lower part, and the upper eyelid is bent at an unnatural curve about one third of its lenght from the inner angle, and after a few similar attacks a cataract is formed, and the case almost universally beyond the reach of all reasonable hope of cure in any possible way.

PREVENTION: This disease like many others being of a hereditary nature, avoid most scrupulously propagating stock from either sire or dam affected with this disease or that have lost either

or both eyes in any other way than by violence : as the foal of stock thus hereditarily tainted are always liable sooner or later to loose their eyes in the same lingering way "may be slow but will be sure."

TRAETMENT : Should case in question be of a rheumatic form, use fluid tincture of Colchicum, and the alkaline remedies, Carbonate or Acetate Potassa or soda freely. Where great and increasing tension or hardness of the eyeball is found it should be treated with irridactomy which can only successful be done by the experienced veterinary surgeon. Keep system well toned up with Oxide of Iron, Nux Vomica, Ginger, Fowlers Solution &c., and as soon as the violence of the fever is abated let the horse be put upon such course of diet, as is calculated to improve his condition, and buoy up his system against the violence of any future. Through foregoing means (where case in question has not pursued its natural course until hopeless) perseveringly adhered to in from 12 to 20 days you may depend upon a decided improvement if not a radical cure without any such superstitious and barbarous practice as burning the gums with actual cautery, or the yet more cruel (if possible) operation of knocking out with hammer and punch the supposed offenders, or with blacksmith's tongs or pincers, or little less lacerating veterinary forceps to tear out by violence the teeth which nature in time will always eradicate.

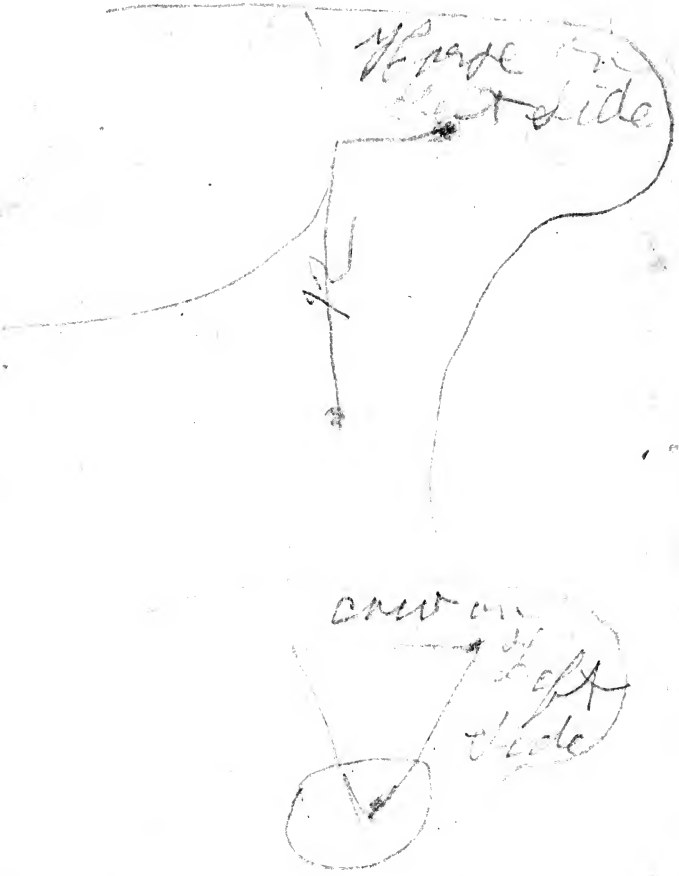
BLOOD-POISONING FROM IMPERFECT OXIDATION OF ALBUMINOID, AZOTOEMIA, AZOTUBIA, ENZOOTIC HEMATURIA, OR SPINAL MENINGETIS.

Symptoms:—This disease presents in various forms and in the milder, shows itself by muscular

tremors, some lameness in a particular limb, without any perceptible cause, and is ushered in subsequent to sudden exertion, and is attended with a dusky brown color of the membranes of the eye and nose, and some signs of tenderness on pressure over the short ribs. The most severe forms come on very suddenly after having driven a very short distance, the horse suddenly losing his life and showing great anxiety and despondency. The victim is in great apparent pain; his flanks heave, nostrils are enlarged, the face is pinched, sweats profusely; trembles violently; his limbs sway and bend, and finally refusing to support their tottering sufferer he falls. If urine is passed it is highly colored, being dark brown, red or black, and is often mistaken for bloody, but is found to contain neither clots nor corpuscles of blood, its color being produced by imperfect oxidation of Albuminoid mixed with an excess of Uria. Although prostrate the animal at intervals is convulsed in limbs and body, demonstrating the uncontrolable influence of the poison on the nervous system. The pulse is variable but high; temperature of the body natural at first, but rises slightly in case the animal survives. This disease may prove fatal in a few hours or days at farthest or improvement take place at almost any time advancing to speedy recovery. The blood is dark, diffferent, coagulates loosely if at all, and has a strong smell. In some cases of recovery partial paralysis of the hind limbs or wasting of the crural nerve and muscles above the stifle, will sometimes persist for a time, showing structural nervous disease. Prevention is to be sought by daily exercise. Where horses have had a time of rest, let them be exercised at first gently by walking, increase-

ing the exercise each day until hardened sufficiently to endure ordinary fatigue.

TREATMENT: Evacuate the bowels, and excite the liver into action by the use of podophyllin ½ drachm, or of Aloes 4 drachms. May be given by drench and followed by injections of soapsuds and fresh lard if necessary. Drachm doses of Bromide Potassium may be administered as often as necessary to lull any nervous excitement accompanying, and after the bowels have been reasonably acted upon, ½ drachm doses of Colchicum and drachm doses of Muriate of Ammonia three times a day. Warm fomentations to the body, and particularly to the loins, have been efficacious, not only in relieving the irritation of the liver, spinal marrow and kidneys, but likewise secures free perspiration which assists in driving out the disease. A newly removed sheep skin may be substituted for the fomentation (if convenient) applied by putting flesh side next to the horse and following with mustard plaster. When the appetite returns the diet must be composed of bran at first scalded with hot water, and may gradually be increased to shorts, midlings, or choped grain as the case may admit or require. In case the paralitic affection does not yield with the subsidence of the general symptoms treat as for functional paralysis.



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